

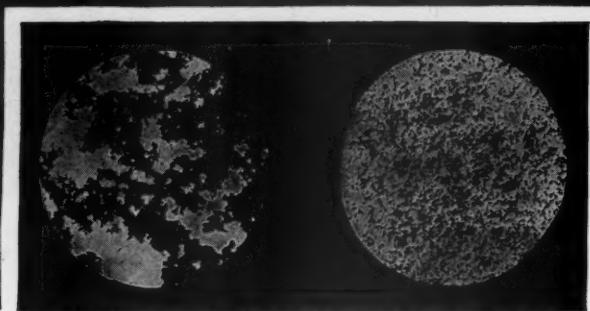
AMERICAN FRUIT GROWER

HAIL
NUMBER

MAY, 1936

Does NuREXFORM

protect even fruiting
no-unprotected gaps?



Compare the compact NuREXFORM film of poison on the right to the spotty film of ordinary arsenate of lead to the left. Chewing insects have no chance when foliage and fruit is sprayed with NuREXFORM.

The powerful
microscope answers
the question . . .

NuREXFORM, the Improved Arsenate of Lead, is unusually effective in controlling codling moth and many other chewing insects. It is the ideal Arsenate of Lead for combining with Lime Sulphur. The natural reaction of Lime Sulphur and Arsenate of Lead being reduced to a minimum.

NuREXFORM remains in suspension. No settling in the tank of your sprayer—no sediment to be scraped off the bottom and thrown away.

NuREXFORM is of uniform strength always. The coverage is not too



thin and watery on the first trees sprayed—nor too heavy on the last trees. This uniform coverage leaves no unprotected gaps where chewing insects may attack.

NuREXFORM thus assures uniform protection for the entire orchard. Every ounce put into the sprayer tank reaches your trees—no waste.

For a larger pack of premium fruit next fall, be sure to specify NuREXFORM when you go to your dealer.

THE GRASSELLI CHEMICAL CO., Inc.



Founded 1839

CLEVELAND, OHIO



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A valuable spraying and dusting schedule, "How and When to Spray" will be sent to you upon request to Advertising Department.



NuREXFORM

The Improved Arsenate of Lead

FARMERS ARE SAYING "THAT'S THE TRUCK!"



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**1/2 TO
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TONS**

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General Motors Trucks and Trailers

GENERAL MOTORS TRUCK COMPANY, PONTIAC, MICHIGAN



Master De Luxe Town Sedan

For work or play CHOOSE CHEVROLET

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always equalized for quick, unswerving,
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FOR ECONOMICAL
TRANSPORTATION

For work or play—for the pleasure which comes from ownership of a motor car, or the profits which come from ownership of a truck—you will find the most satisfying and money-saving answer to your needs in the Chevrolet line.

The beautiful new 1936 Chevrolet, with all the exclusive quality features listed at the right, is *the only complete low-priced car*—as well as the most economical car to operate and maintain.

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AMERICAN FRUIT GROWER

The only complete low-priced car

NEW PERFECTED HYDRAULIC BRAKES
(Double-Acting, Self-Articulating)
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SOLID STEEL one-piece TURRET TOP
a crown of beauty, a fortress of safety

**IMPROVED GLIDING KNEE-ACTION
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the smoothest, safest ride of all

**GENUINE FISHER NO DRAFT VENTI-
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giving even better performance with
even less gas and oil

SHOCKPROOF STEERING*
making driving easier and safer than ever before

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MAY, 1936

AMERICAN FRUIT GROWER

TITLE REGISTERED IN

U.S. PATENT OFFICE

MAY

1936

VOL. 56

THE NATIONAL FRUIT MAGAZINE

NO. 5

PROTECTION AGAINST UNCERTAINTY

SCIENCE makes it possible for the fruit grower to protect his crops against almost every danger except Hail. Insect pests, disease, depleted soil conditions and drought can be overcome by doing the right thing at the right time. Against Hail—the aptly termed "dance of death of the elements"—and the destruction it so frequently leaves in its wake, the fruit grower is helpless. There is nothing he can do, no amount of money he can spend that will protect his crop against the sudden, savage attack of a hailstorm. The fruit grower can, however, protect himself against financial loss caused by hail damage by the simple expedient of investing in hail insurance. The wise fruit grower will not gamble against colding moth. Why, therefore, should he gamble against the elements?

In the Old World the subject of hail insurance on growing crops is not new, as its history runs back for over a century. In certain European countries the hail insurance companies are granted government subsidies. In Bavaria this form of insurance is conducted by the government. In certain other countries hail insurance has been made compulsory by law.

In the United States the business of writing hail insurance on growing crops is of comparatively recent origin. From what information it is possible to obtain, it appears that the first organization to write this class of insurance in the United States was a small mutual which was organized by tobacco growers in the state of Connecticut about the year 1880.

In this country today there are three different kinds of organizations which now write hail insurance, as follows:

1. MUTUAL HAIL INSURANCE COMPANIES, which as a rule limit their busi-

ness to writing insurance on growing crops, indemnifying against loss or damage caused by hail. Usually the Hail Mutual insurance company has a very small cash reserve and the members contract for coverage by paying a small premium in advance, and agreeing to pay such assessments as may be found necessary for the payment of expenses and losses, or they agree to accept

pro rata payment of losses in case the expenses and losses exceed the premium income of the organization.

2. STATE HAIL INSURANCE. Some states have passed laws which provide for writing hail insurance through state boards or departments, under whose direction and control state hail insurance funds are administered.

3. JOINT-STOCK FIRE INSURANCE COMPANIES. These organizations, as the name implies, are organized under the laws of the state where the charter is obtained, and are required to have a cash capital which is derived from sale of stock to stockholders, and in addition to the cash capital they carry a reserve which is presumed to be sufficient to pay all expenses of operation and maintain a fund sufficient to pay all losses which may occur.

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A "Round Table" Page for Every

Grower

AMERICAN FRUIT GROWER

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MAY, 1936



This modern fleet of seven International Model C-40 Trucks and semi-trailer vans plays a big part in the transportation of Florida fruit. The fleet is operated by Florida Fruit Carriers Association, Orlando, Fla.

Something to go by when you invest in a TRUCK

Last year all trucks together gained 26 per cent in sales over 1934. INTERNATIONAL Trucks gained nearly 70 per cent! Those are very important figures to every man who is wondering which truck he should buy. International's big comparative gain in public demand is something convincing to go by when you invest in a truck.

International Harvester has built rugged trucks for heavy-duty work for close to 36 years. More and more it is recognized that International Har-

vester delivers extra value in a truck of any size—in sturdy, reliable power—in economy of operation and upkeep—in sure-fire service from dealer or Harvester branch. The background of its long, close contact with agriculture has qualified it to build trucks perfectly suited for tackling your hauling problems.

Let the nearby International Truck dealer, or our branch, demonstrate the Half-Ton Model C-1 or one of the larger Internationals. Drop us a line for the truck catalog.

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The International Model C-1 Pick-Up Truck shown above is a mighty handy general-purpose truck.

Half-Ton 6-Cylinder International Model C-1: A fast, sturdy, good-looking economical truck for year-round hauling. Panel, canopy-top, express, and station-wagon bodies available. Model C-1 comes in 113-in. and 125-in. wheelbases. Chassis prices start at \$400 f.o.b. factory.

INTERNATIONAL TRUCKS

HAIL INSURANCE

The Fruit Grower's Defy to the Elements

By WILLIAM H. ZIPF

EVERY grower must ponder the question of hail insurance in his own mind and the ultimate conclusion reached determines whether or not he is protected against a factor over which he has no control. Precautions may be taken against insects and diseases by spraying and against drought by irrigation facilities, but hail knows no control and the only alternative is investment in insurance. It is a well-known fact that where there are measurable risks there is a field for

Apply These Factors To Your Own Case

Hail is an unpredictable hazard of the forces of weather and may occur in any section of the country.

The intensity of hailstorms is varied and they carry the unknown power of destroying one or one hundred per cent of the crop.

A major portion of the hail insurance for fruit has been written in the East, but during the past few years the Middle West and surrounding sections have come in for their share of policies. Most of the insurance companies have organized their business by territories. Rates and the maximum amounts of insurance allowed per acre are standardized for these regions. The limit of insurance for a given crop per acre is uniform and in the case of most fruits the amount is \$300. The limit for the brambles is usually \$250 and for grapes and strawberries \$200



insurance and in recent years there has been a marked increase in the amount of hail insurance taken out on fruit, particularly apples.

For a grower to put all of his time and effort into a crop, as well as money for equipment and materials, and then to have it wiped out by a hailstorm is reason enough for the existence of this type of insurance for fruit.

Starting in the early 1920's hail insurance companies realized that fruit growers suffered substantial annual losses due to hail in the same manner as the general farmer. The companies, at that time, inaugurated an active campaign to equip fruit growers with their policies. There had been some instances of hail insurance for fruit prior to this, but the bulk of the business started about 1920.

MAY, 1936

Damage caused by hail varies with the time of occurrence and the type of fruit. While some fruits are damaged more than others, all types are at least thrown out of top grade by damage from hail.

Uniform rates are offered by most companies in a given district, but these rates may vary between different sections in a given state.

There have been developed, through experience and standardization, definite methods of checking the damage to fruit.

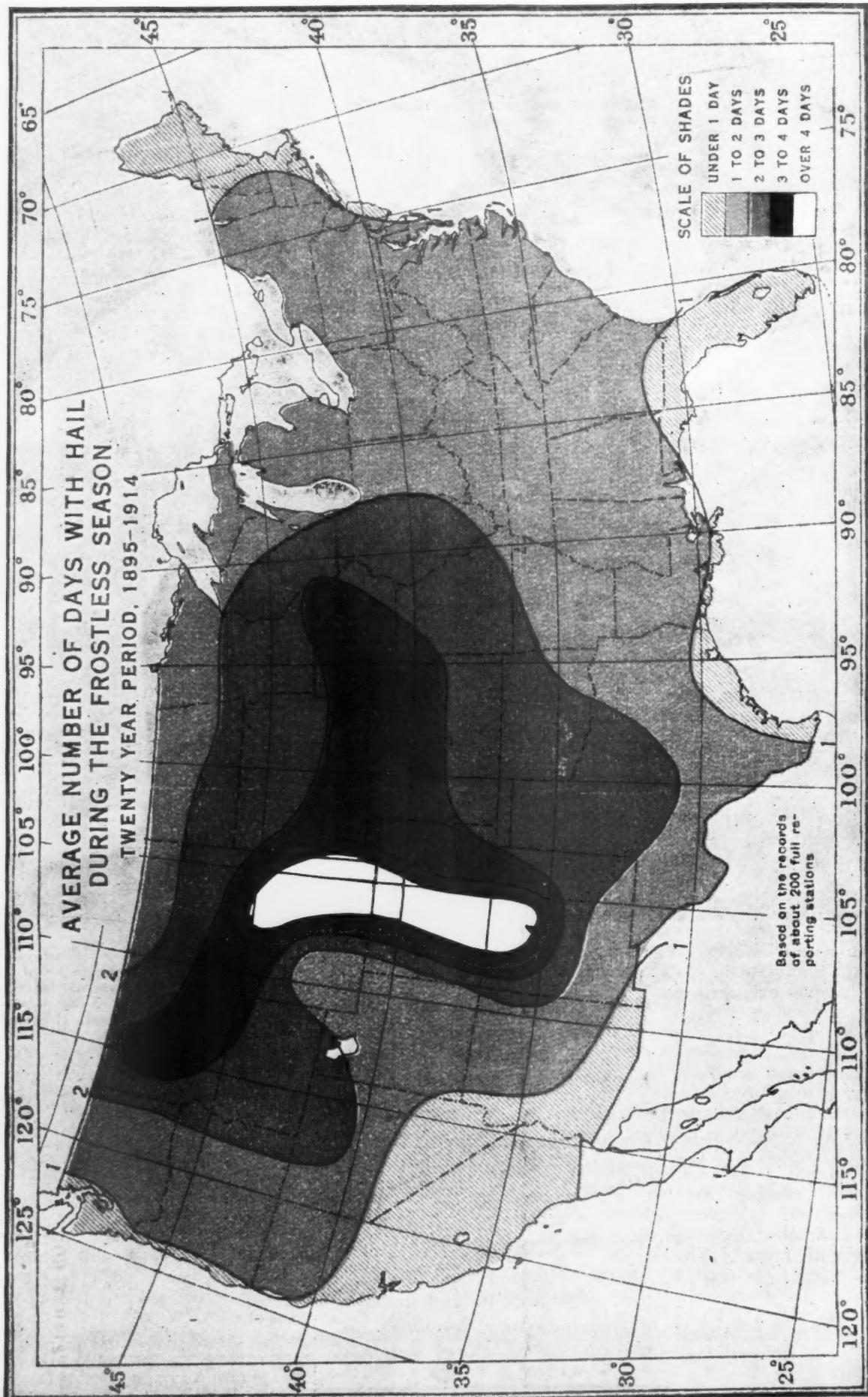
When hail hits the grower is helpless. Even in the highly organized Byrd orchards of Virginia months of work was undone and more than \$25,000 worth of damaged fruit, like that shown above, was left in the wake of an unexpected hailstorm.

per acre. These amounts vary greatly according to company specifications and orchard location.

Uniform rates are offered by most companies in a given district, but these rates may vary greatly between different sections in a given state. There is no attempt by any of the companies to insure a crop for its full value; instead, an arbitrary amount per acre is set by the company and premiums are paid on this amount.

Hail insurance is usually paid for on the basis of the amount of insurance. This is usually four or five per

(Continued on page 25)



STUDY THIS MAP IN RELATION TO YOUR OWN LOCATION

This map shows the average annual number of days with hail between the time of last killing frost in spring and the first in autumn. The length of season on which the map is based varies for different sections of the country and for each year, corresponding with the length of the frostless season. (Map prepared by U. S. D. A.)

HAIL!

THE ELEMENTS' DANCE OF DESTRUCTION

By W. A. MATTICE

Division of Climate and Crop Weather
U. S. D. A. Weather Bureau

THE heavy clouds have been building up in the west since noon and now, in the middle of the afternoon, the ominous rumbling of thunder can be heard. The dark masses of the thunderstorm draw nearer and nearer and then, with the first gush of rain, small pellets of ice dance in the streets. How often you have seen this, and yet, for some of us, how dreaded it is! These small hailstones are harmless; they are merely something interesting to watch and remark about; but sometimes when the stones are large, and there are crops that may be destroyed,

what a different story it is after the passage of the storm.

Hailstones as large as baseballs, or as grapefruit, and even larger, are on record. Some of these have been duly authenticated, but many of the extremely large stones claimed to have been witnessed have no backing other than word-of-mouth reports. The Weather Bureau listens with interest to the reports of hail as large as an elephant, or as large as a millstone, and to various tales of large blocks of ice falling from the skies, but such claims are usually without foundation.

Damage from hailstones runs into enormous sums of money at various times, and the total estimated damage in any one year may and probably often does run into the millions. An authenticated instance of severe damage from a single hailstorm comes from Kansas on May 4, 1931, when the path was 100 miles long, and another in Montana on August 7, 1931, with a path 250 miles long. A Connecticut storm on July 22-23, 1931, caused estimated damage of a million dollars, while the Kansas storm was equally destructive. The estimated annual average damage from hail runs into eight figures,

DANCE

ranging from around \$11,000,000 to nearly \$75,000,000. This is a very wide range and probably some of the higher figures represent preliminary estimates of damage that may be found later to have been less severe than had been thought. For example, the damage to a field of corn may appear almost total after a severe hailstorm, but recovery in part may reduce the actual amount.

Well authenticated reports of hailstones of large size come from Potter, Nebr., on July 6, 1928, with a single stone 17 inches in circumference and weighing a pound and a half. A storm in Dallas, Texas, on May 8, 1926, caused a tremendous amount of damage. In this storm thousands of panes of glass were shattered, automobile tops riddled, and ordinary shingles were pounded to toothpicks.

Various and sundry ideas prevail as to hail. In the winter when conditions are right, we are confronted occasionally with small pellets of ice, which are caused by rain falling through a cold lower layer of air and freezing. This is not hail according to the usual definition. Hail is composed of successive layers of clear ice and snow ice; the larger stones show this concentric layer effect very clearly. The smaller ones are usually formed of only one or two layers and they are not large enough to be broken to show the layers, or they melt so rapidly as to preclude close observation.

Dr. Humphreys of the Weather Bureau staff has calculated that the force of the updrafts of wind in the front of a thunderstorm necessary to produce hail ranges in the neighborhood of 60 miles per hour for a one-inch stone, while if the stone were three inches in diameter, it would re-

(Continued on page 21)

Hail destruction is not always limited to the fruit alone. Often the fury of a sudden storm plays havoc with trees as well as crop, as shown by the photograph at the left.





Left—A seedling orchard at the New York Agricultural Experiment Station, Geneva.

Below—Buds ready for emasculation, an important fruit breeding process.

Center—Anthers cut from buds, to obtain uncontaminated pollen.

Bottom—Buds covered after emasculation and pollination in order to prevent undesired pollination.

The Making of A NEW FRUIT

By RICHARD WELLINGTON
New York Agricultural Experiment Station

THE making of a new fruit might be considered from one or many angles. For instance, one could devote the entire space to a particular fruit, or, again, to many fruits. Further, one might consider the subject from the standpoint of the required technique. Possibly a brief mention of several phases would be of the most general interest.

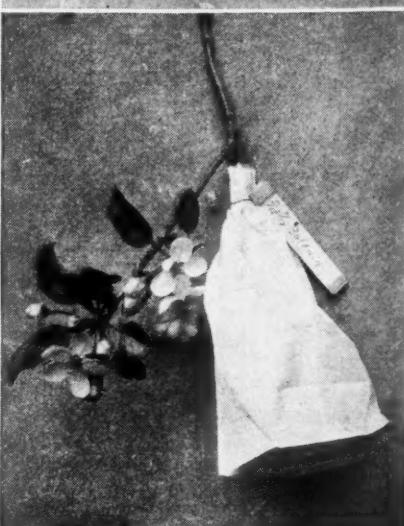
A fruit breeder, if he conducts his work efficiently, must have an excellent knowledge of the existing fruits and very definite objectives. If this background is lacking, he can easily waste much time and money. The breeder of fruits should also be acquainted with the breeding work in other fields, for the same biological principles may apply to his problems. The breeder must also be on the lookout for new and better parental stocks. The best is none too good. Why spend time trying to develop something that nature has already produced by thousands of years of natural selection? Prof. N. E. Hansen aptly covers this point when he says, "If you wish to produce hardy varieties, start with the hardest and not with the tender kinds." He has proved to be a man of his convictions, for he has traveled to the far ends of the earth looking for the hardest plants.

Possibly no people realize the value of breeding and the value of securing desirable parental stocks better than the Russians, at least, according to

their great agricultural leader, Dr. N. I. Vavilov, they are sending out each year large exploring expeditions to collect every possible variation or "gene." These variations are being perpetuated in large gardens for present and future breeding work. Are we preserving the variations in our fruits for the generations to come? Unfortunately not, although such a move has been advocated over and over again by many prominent fruit breeders.

There are no perfect fruits and there never will be, for it is impossible to pack all of the best qualities into one individual. However, it is possible to secure fruits that possess a still higher proportion of desirable characters. Such being the case, it is the purpose of the plant breeder to combine as many good characteristics as possible. Each forward step provides still better material for breeding purposes. Unfortunately, every step is not always forward. The character that you may wish to pass on may not reappear in the next generation or generations. What happened? Possibly the character itself was due to a combination of many small determiners, and these determiners were scattered "in the shuffle." Or, again, certain determiners may have perished. At least, such seems to be the case when one tries to obtain black raspberries from the purples—the

(Continued on page 23)



MAY, 1938

WATCH
for the
JUNE
NUMBER

AMERICAN
FRUIT
GROWER'S

ANNUAL DIRECTORY EDITION

By JONAS HOWARD

PLAN now to preserve your copy of AMERICAN FRUIT GROWER's Second Annual Directory Edition as a double-purpose reference book. You will receive it next month as the regular June issue of AMERICAN FRUIT GROWER. You will find it to be a double-purpose edition because in addition to containing the ever-handy Buyer's Guide section, it will also bring you a series of illustrated editorial articles on "Going to Market" which you will find comprehensive enough in scope and detail to be classed as a manual of modern packaging and merchandising of fruits of all kinds.

In these modern days there are many agencies—federal, state and local—that are ready and willing to devise and guide you in the growing of better fruit. It is not so easy, however, for you as a fruit grower to receive the latest and most expert advice and suggestions on the newest methods of packaging and marketing your

products. To help you in this all-important phase of your business, and to give you a comprehensive understanding of the progress which is being made in better and more profitable marketing of fruits, page after page of the June Directory Edition will be devoted to the very latest information on packaging, labeling, branding, distribution and the stimulation of the desire to buy on the part of prospective purchasers. It will be the first time that so much valuable material on the subject of fruit merchandising will have been placed in your hands in such an interesting and convenient form for ready reference.

You will find in the June issue articles describing the new fruit containers which have been designed by packaging experts and which, in exhaustive tests, have proved that they can make "two sales grow where only one grew before." In creating these containers the packaging experts have utilized modern materials which help

to glorify the product itself by displaying the natural beauty of fruit to the best advantage, thus enabling the product itself to be its own "star" salesman.

AMERICAN FRUIT GROWER's June Edition will also contain the now famous Buyer's Guide section. Again, as last year, this Directory will be your handy reference book when it comes to answering that recurring question, "What to buy and where to buy it?" This Second Edition of the Buyer's Guide will be even more complete and scientifically indexed so that you will be able to find just where to purchase those things which often are hard to obtain.

Just as the hands in the picture above are eagerly reaching for the helpful June issue, so will you and the members of your family refer to it again and again at frequent intervals throughout the year. This double value "Going to Market" guide is coming in June. Watch for it!





This attractive sign, located just outside of Wooster, Ohio, makes an appeal to the consumer and invites potential customers to visit the salesroom just off the main highway.

ROADSIDE RETAILING *Comes of Age*

By CHARLES W. HAUCK
Ohio State University

PART I

I'M a layman, untrained in architecture, in landscape gardening, or in psychology. As a roving, inquiring patron of roadside retail establishments of various sorts here and there, I know that only certain things are pleasing to my eye and other things displeasing, and that under certain circumstances I am likely to act thus and under other circumstances to act so. I don't always know why. But I believe that most human beings are likely to respond to those same things in much the same way.

These reactions of human beings translate themselves into success or failure for the roadside business man. The prospective customer is either attracted or repelled. Therefore it would seem worth while for that business man to consider how the devices he employs to win trade are likely to affect us consumers of hot dogs, and gasoline, and apples, and tomatoes, and eggs.

For a hundred years commercial development has been doing things, unpleasant things, to the natural beauty of the United States. Many a lovely countryside has been marred. In response to the urge for profit, unsightly structures have appeared everywhere along heavily traveled highways.

Yet now we are learning that our

heedless indifference to appearance was ill-advised, if only from the standpoint of profits. Ugliness hasn't paid. So our commercially-minded world is steadily regaining its earlier beauty. Certainly there are fewer unpleasant things to look upon than there were 20 years ago, or 10, or even five. Whether that is due to a

growing appreciation among us of beauty for beauty's sake or for profit's sake, I do not claim to know. Be that as it may, the monstrosities masquerading as business places along our highways are proportionately fewer.

Turn with me for a moment and let us look back a few years. You will recall that ugly little shack there by the narrow mud road where Greasy Gus filled the tank of our tin Lizzie from the single pump standing directly by the road. What little traffic there was moved slowly of necessity, so it mattered little if we obstructed it somewhat as our mechanical camel stood there at this oasis with two-thirds of its anatomy protruding into the right-of-way. Gus had little artistic temperament. He had neither time nor inclination for what he termed "impractical hokum." He gave no thought to paint, or shrubs, or flowers. Hard-headed businessmen like Gus had no interest in such frivolities. Those were for sissies, and poets. There was no profit in 'em, but only expense. Men lived by profit.

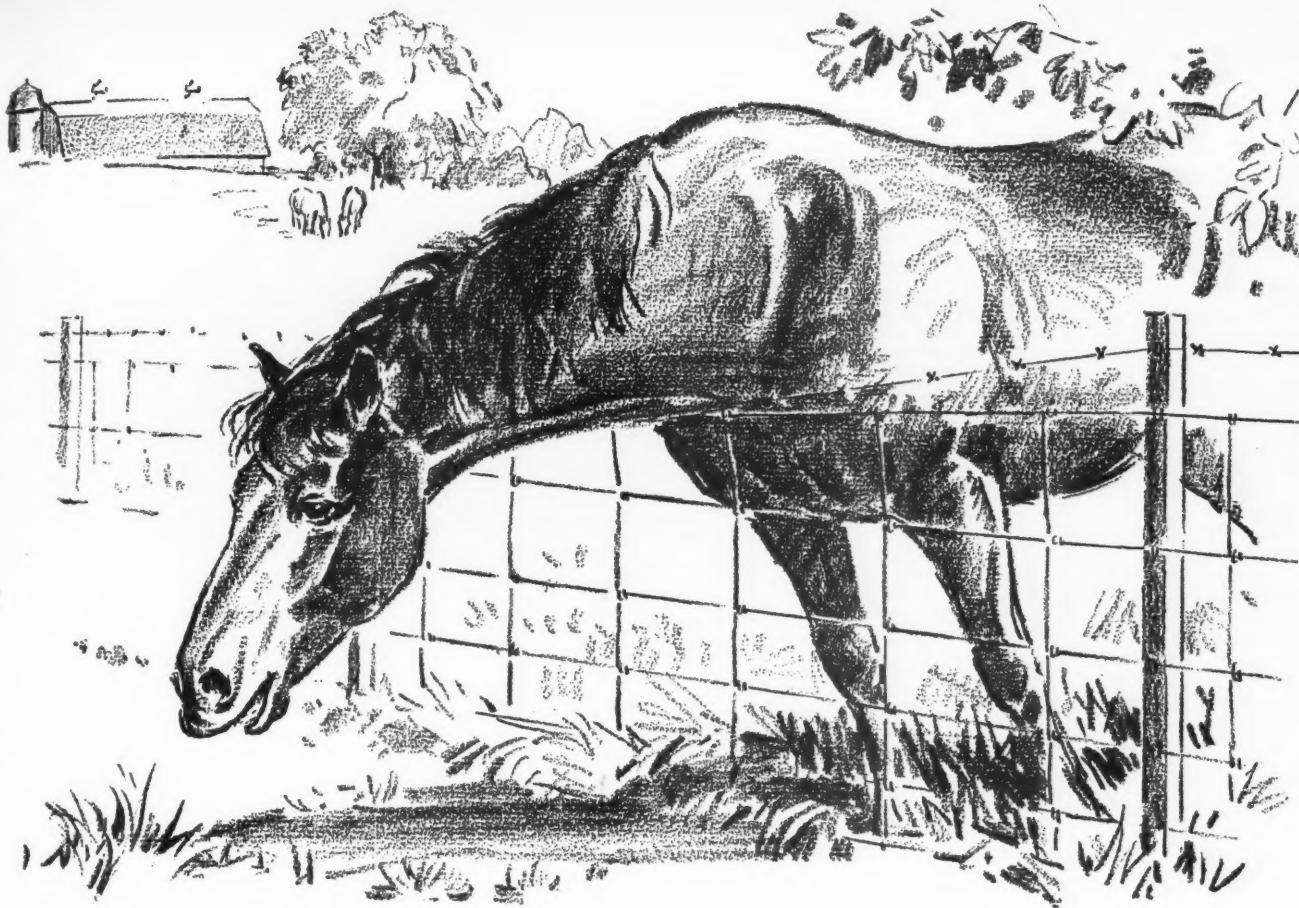
I've watched Gus since then. That old mud road has become a wide concrete highway with a well-banked curve and a beautifully designed bridge across the stream just beyond Gus's station. Trees and shrubs and grass along the well-graded shoulders make picturesque scenes everywhere. The shanty, once so unsightly, has been displaced by an artistic station, well planned, attractive, and manned by clean, courteous, alert attendants, under the eagle eye of Gus himself. When our old friend appears to greet us we find him the cleanest, most courteous and alert of them all. And wonder of wonders, he enthuses over his shrubs and flowers, while insist-

(Continued on page 20)

A customer is attracted by the neat appearance and ample parking facilities of the Quick Fruit Farm stand near Akron, Ohio. Attractive display of the fruit allows the buyer to make his purchases with ease.



AMERICAN FRUIT GROWER



THE GRASS ON THE OTHER SIDE

YOU can excuse a horse for galling his neck on barbed wire, trying to reach the scraggly grass on the other side of the fence, *when he's already standing knee-deep in clover . . .* for, after all, he's just a horse! But you CAN'T excuse intelligent human beings for making the same mistake.

* * *

Every day you hear people raving about "the good old days!" . . . wishing they could live 'em all over again! . . . straining to reach back for the grass on the other side of the fence!

* * *

"GOOD OLD DAYS!" When you couldn't phone for a doctor. When you had to take your bath in a wash-tub. When the only way to cure a toothache was to pull the tooth. "Good old days" of undelivered mail, forded creeks and hub-deep mud; of dropping corn by hand, cultivating it with a hoe and grinding your own cornmeal. "Good old days" of green coffee out

of a burlap sack, of home-roasting and of hand coffee grinders. "Good old days" of no automobiles, or movies . . . no newspapers or magazines; when the most exciting thing you could do was to write a jingle in her autograph album or butter your hands and pull taffy. When you took heated rocks to bed with you in winter and shooed flies all summer with slit paper on the end of a hickory withe. How can anybody, spinning along over perfect roads in one of these slick-running 1936 cars, *with the radio on*, talk about "the good old days?"

* * *

Mother, would you like to go back to the old tin cupboard and wood box? Would you like to drain lye out of an ash barrel, make your own soft soap and boil your clothes in an iron kettle? Father, would you like to take a wax-end and a mouthful of wooden pegs and make yourself a pair of boots? "The good old days" were noble.

Viewed down the long corridor of memory, they lure us . . . but not for long. Our better sense tells us *all that is just "grass on the other side of the fence."* And we give thanks that this is 1936!

* * *

Sears, Roebuck and Co.'s job is to keep pace with swift-moving America. And, no matter what your advancing tastes may demand, to give you . . . always . . . the newest and best for less money.

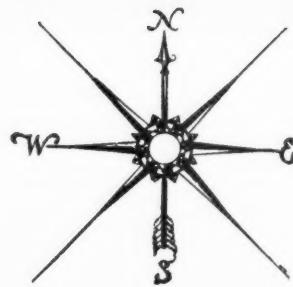
The high quality, low prices and advanced product design in your present Sears Golden Jubilee Catalog will, we believe, convince you that Sears, Roebuck and Co. are anticipating and doing whatever is necessary to keep you a satisfied Sears customer.

SEARS, ROEBUCK AND CO.



STATE NEWS

FROM NEAR AND FAR



KANSAS—Hot, spiced cider as an appetizer. Sounds different, and it was different to those in attendance at the Farm-Home banquet at Kansas State College. It was a cold night and the hot cider added zest to the meal. There were exclamations of surprise when the diners tried the appetizer, and they were elated with the tasty beverage.

Conversation centered on this new way of serving cider, and those present discussed the apple from every angle after their thoughts were stirred by this beverage.

All of this talk about apples comes from the desire of the National Apple Institute to have a part in the awakening of the apple appetite. There are millions of people to whom a pink apple blossom is the best news of the day, and a story of apples, spiced with cinnamon and sweetened with honey, is more important than a Supreme Court decision.—**GEORGE W. KINKEAD, Sec'y, Topeka.**



Anticipating an outbreak of rosy aphid, most of the growers have applied tar oil sprays, much to the sorrow of the aphid, we hope, and much to the discomfort of the spraymen, we know.—**A. F. VIERHELLER, Sec'y, College Park.**

This late-ripening habit is desirable in a currant variety grown for local market. The earlier varieties help to get the housewives in the notion of making jelly, making the later varieties easier to sell.

One of our very useful native North Dakota shrubs is the yellow flowering currant. The fruit of this plant is edible and much liked by some people. I understand that this currant has been found to be self-sterile, that is, more than one variety must be grown if fruit is to set. Perhaps this may account for the reputation for being unfruitful that named varieties of it have.

Degman and Auchter of the U.S.D.A., from careful measurements of 495 apples resulting from the use of pollen of various kinds, conclude that there is very little, if any, effect of the different pollens on the fruit resulting. That is, an apple blossom pollinated by any other variety will always produce practically the same kind of fruit. On the other hand,

MARYLAND—After one of the most severe winters in many years, growers are busy trying to get the pruning job done before the spring rush. In general, the peach buds are in rather good condition. Bud injury from cold varies in the different sections and orchards, and even in orchards where the growers seem to feel that there is no crop there appears to be hope in the live buds that are found. Tree injury seems slight, but there is some damage in the browning of the young wood under the bark. Only time will tell what effect this will have upon the buds, but it looks hopeful.

Dr. A. Lee Schrader has been appointed acting head of the University of Maryland Department of Horticulture, succeeding Dr. J. H. Beaumont, who was recently appointed principal horticulturist at the University of Honolulu Experiment Station, Hawaii.

Dr. I. C. Haut, formerly of the Oklahoma Experiment Station, has been appointed associate pomologist in horticulture at Maryland Experiment Station.

N. C. Graybill, owner of the New Windsor Orchards, passed away on March 11 after a long illness. Mr. Graybill was prominent in Maryland fruit growing, and will be missed by his many friends.

C. E. Bryan, a prominent grower of the state, has returned from Florida, recovering from illness contracted during the winter. Mr. Bryan is president of the Maryland State Horticultural Society.

UTAH—A many-sided program of action by federal, state, county and other agencies to solve the problems of the Utah fruit industry, in addition to efforts by individual growers to improve their efficiency in growing and marketing fruit, was called for in resolutions passed by representatives of the fruit industry of Utah at the ninth annual convention of the Utah State Horticultural Society recently held in Salt Lake City.

J. Erval Christiansen of Provo was re-elected president, Nello Christofferson of Brigham City was elected vice-president, and Prof. F. M. Coe, associate horticulturist of the Utah Agricultural Experiment Station, was re-elected secretary-treasurer.

Directors elected were: W. R. Zollinger, Providence; N. J. Valentine, Brigham City; W. N. Barker, North Ogden; John Birmingham, Bountiful; H. B. Woodbury, Granger; Arza Page, Payson; Mat T. Howard, Nephi; Dr. D. W. Gibson, Hurricane, and Dr. A. L. Wilson, Logan.

Federal aid to fruit growers in meeting the problems created by extensive winter injury and drought, and equal consideration with other crops in the new soil conservation-erosion control plans were urged in resolutions passed by the convention. Other resolutions called for assistance in eradicating peach mosaic; resumption of market reports on fruit and vegetables; additional research work on orchard problems by the U.S.D.A. and the Utah Experiment Station; and enforcement of spray laws, and laws prohibiting the sale of cull fruit from other states as well as that grown within the state.

The society moved to eliminate losses from trees proving untrue to name by appointing a committee to draw up recommendations for legislation to penalize misrepresentation in the sale of nursery stock, and for nursery inspection or certification to aid in preventing varietal mixture.—**F. M. COE, Sec'y, Logan.**

NORTH DAKOTA—The Viking currant, which has been found immune to white pine blister rust, seems to resemble Long Bunch Holland and Prince Albert, according to descriptions.



the pollen used on date blossoms may have a very great effect, according to Mixon.

It is very important to know just the proper conditions for the germination of seeds when one is doing fruit breeding work. E. M. Henry of the Tennessee Experiment Station says that a temperature of 77°-80° F. is the proper one for the germination of strawberry seeds.—**A. F. YEAGER, Sec'y, Fargo.**

PENNSYLVANIA—The Franklin County Horticulture Society recently staged a most successful annual banquet at Chambersburg. This was the second of a series of such annual affairs. Last year, the banquet was free to all Franklin County fruit growers; this year, it was a pay-as-you-enter proposition. The remarkable feature was that last year 119 were present, and this time 106 attended.

President Christ C. Miller acted as toastmaster, introducing as speakers R. J. Gillan, who presented the prizes won at Harrisburg; H. M. Turrell, deputy secretary of agriculture; H. M. Weigel, president of the Adams County Fruit Growers' Association; J. O. Pepper, G. M. Zundel and R. H. Sudds, all of State College.

Pepper showed some excellent movies of insects at work and their damage to fruit and foliage.

MAY, 1936

The background of the meeting was apple advertising. Most of those present were willing to pay a cent a bushel for advertising purposes.

County Agent J. H. Knodle, Chambersburg, deserves special mention for his part in arranging the meeting.

Peaches will be light in two leading areas of Franklin County and normal in the third. While Adams County does not have many peaches in prospect in some orchards, others are said to be loaded with fruit buds. We shall no longer predict the size of the crop from the buds, for we dislike to be wrong so often.

The summer meeting will be held at State College on the last Monday and Tuesday of July, so mark your calendars. The summer tour will begin Wednesday or Thursday, depending on where we go.

R. D. Anthony has returned from a three months' leave of absence, spent at Michigan State College. He has acquired many new things to talk about, he says.

Berks and Lehigh counties are apparently considering seriously the merits of apple advertising in some form or other.—R. H. SUDDS, Sec'y, State College.

FLORIDA—The 49th annual meeting of the Florida State Horticultural Society will be held in DeLand on May 5, 6 and 7. Meeting with the society, and as a part of it, is the Krome Memorial Institute, with Paul Hoenshel of Mayaca, as vice-president and chairman. Program of the institute is devoted to the discussion of subtropical fruits exclusive of citrus. Dr. David Fairchild of Coconut Grove is honorary president of the institute. Present officers of the society are: president, John S. Taylor, Largo; vice-presidents, S. F. Poole, Lake Alfred; C. I. Brooks, Miami; C. W. Lyons, Tampa; treasurer, N. A. Reasoner, Oneco; executive committee, F. M. O'Byrne, Lake Wales; H. Harold Hume, Gainesville; and T. Ralph Robinson, Orlando.—BAYARD F. FLOYD, Sec'y, Davenport.

MINNESOTA—Unprecedented low temperatures of the past winter caused considerable speculation among fruit growers in this territory as to the effect on fruit trees and plants, especially with some of the newer varieties that have not previously been subjected to such prolonged periods of intense cold. Minimum temperatures ranged from 35° to 45° below zero. While this report is being written before the ground has completely thawed out, it is evident that apples, plums and raspberries are in excellent condition with less than the normal amount of winter damage. Pear trees show some evidence of injury. Preliminary examinations of strawberries indicate that most plantings are in good condition, although there is considerable injury in some spots, particularly on exposed ridges and other places where the snow cover may have been blown off during the early winter months.

Interest in horticultural activities is showing an upward trend this year with membership in both the State Horticultural Society and the Minnesota Fruit Growers Association running ahead of last year.—J. D. WINTER, Sec'y, Minn. Fruit Growers Assn., St. Paul.

INDIANA—The interest in apple scab control has been paramount in practically all fruit meetings held this spring. The initial apple scab spray cards giving the date for the initial spray following the first rain were sent on March 28 to southern Indiana counties, extending north to Knox, Lawrence, Jackson, Jennings and Ripley counties. Maturity of scab spores was progressing a little more slowly during the cool weather of early April but initial warnings were mailed during the

(Continued on page 17)

MAY, 1936

Camera!



Dr. C. R. Cleveland, of Chicago, greets Frank Farnsworth of Waterville, Ohio, in front of the Manufacturers' Building at the Indiana State Fair grounds where the Indiana Hort Society meeting was held.



Roy P. McPherson, left, secretary of the New York State Horticultural Society, greets Stickney Stark of Louisiana, Mo., at the start of the New York meeting in Rochester.



Two veterans of the insecticide game meet at the New York meeting. They are W. M. Dickson, left, and B. G. Pratt.

AMERICAN POMOLOGY

A Page Conducted in the Interests of the
American Pomological Society

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Edited by H. L. LANTZ, Secretary

NOTES ON ANNUAL MEETING

I HAVE just been perusing a part of the stenographic record and also the printer's first 50 pages of proof of the A.P.S. proceedings of the Hartford meeting. That meeting made horticultural history. Four days, over 30 speakers, and pages of discussion from the floor, all make for an outstanding report. The papers and discussions cover a wide range of horticultural subjects.

That part of the report relating to advertising the apple reads like a novel because it is full of action and presents the problem in a really dramatic way. President B. S. Pickett stated during one of the discussions that the people of America eat 17 billion apples annually. If my arithmetic is correct, that makes each of us eat approximately 132 apples or considerably less than a bushel per capita. If by well-directed publicity, each man, woman and child were induced to eat just one more apple per week, it would require six and one-half million more apples to do the trick, and then where would the dreaded surplus be?

Small-fruit growers will be interested in the discussions concerning new varieties, new information on culture, handling, uses of berries, and diseases which will appear in the report of the A.P.S. meeting held in Hartford. Dr. George M. Darrow, senior pomologist, U.S.D.A., Beltsville, Md., led the discussions at the meeting, and his report on new varieties, culture, etc., contains a great deal of information of practical value. He said in part:

"This winter, plants of the Viking currant, a leading variety of Norway, are being sent to experiment stations in northern states. This variety has been found by Dr. Glenn Gardner Hahn of the U.S.D.A. to be immune to the white pine blister rust and is now to be tested for its horticultural value in this country. If it is productive it may be of considerable value in sections where it is desirable to grow only currants immune to the white pine blister rust."

"The Red Lake currant, recently named and introduced by the Minnesota Experiment Station, has remarkably long clusters of large, fine-quality berries, and tests as far east as the New Jersey Experiment Station indicate that it is a promising new sort.

"Three new raspberries, the Taylor red, Sodus purple, and Evans black, have just been named by the New York Experiment Station. The Taylor is the first of the hybrids between the exceedingly large-fruited Lloyd George and American red raspberries to be introduced. Tests in Massachusetts, Maryland, Ontario and

Oregon, as well as in New York, have shown the Taylor to be a promising sort. The fruit is very large, long, firm and of high quality. It is of interest that both the Oregon and Washington experiment stations also have many promising selections resulting from crosses of Lloyd George with other sorts. The Sodus is a firm, large purple variety of high quality. A few years ago there was no purple variety that could be recommended for general culture. The Potomac, introduced by the U.S.D.A. a few years ago, has been found one of the hardiest of all raspberries, surviving the extremely low winter temperatures of Iowa and Minnesota, better even than the Latham under some conditions. It also may be grown farther south than most sorts. The Sodus is larger than Potomac and possibly better in quality. It may be as firm, not quite so attractive in color, and not so disease-resistant. These two varieties should revive interest in purple raspberries. The Evans black raspberry is resistant to leaf spot and for that reason may be of particular interest toward the southern limit of raspberry growing.

"The Boysen dewberry (Boysenberry) was introduced in southern California last year but is of more than local interest. It is another variety of the Young dewberry type, which type has the finest flavor and largest size of any of the blackberry-dewberry group. It is worth testing wherever dewberries are raised. Its parentage is not known, but it has the type of plant which might be expected as the result of a Logan-Lucretia dewberry cross.

"Though the Catskill, Dorsett and Fairfax strawberries have been in the trade for over two years, it may be well to say a little regarding them. All three are succeeding from Virginia and western North Carolina, west to northern Arkansas, and north to southern Wisconsin and southern New England. However, all three are so vigorous that where runners are produced freely they may make such a dense stand that little fruit is produced. In contrast, in areas such as the Middle West where it is often difficult to get a stand of plants or in other regions where the plant stand is not allowed to get too dense, these three varieties usually are considered promising. In general, compared with Howard 17, Dorsett is as early or earlier, Fairfax three to five days later, and Catskill five to seven days later.

"About a year ago a bulletin on the culture of the Blakemore strawberry recorded the results of comparing spaced with matted rows of plants in North Carolina. The row with plants spaced

nine inches apart yielded at the rate of 4,194 quarts of No. 1 berries and the dense 30-inch matted row at the rate of 1,329 quarts per acre. There were over 16 times as many plants to the matted row as to the spaced row, yet the yield was less than a third as much.

"Beside this striking difference in amount of U. S. No. 1 berries, there were equally important differences in their keeping quality. Where the plants were in double-hill rows, the average decay of berries one day after picking was six per cent, where the plants were spaced nine inches apart there was eight per cent of decay, while in 30-inch wide matted rows the decay was 26 per cent. Last June I saw fields in matted rows both in Connecticut and in New York where the decay would be equally as high as in the experimental matted row. In one field with dense matted rows in Connecticut a large part of all the green berries on the plants were rotting. Spacing plants so that the dew and rain can dry off much more quickly than in matted rows is an effective way to reduce decay in the field.

"Recently several diseases of the strawberry have come prominently to the attention of growers. Those raising the Howard 17 (Premier) and Blakemore have noted the yellow plants called 'gold leaf' or 'June yellows.' With the Howard 17 only one stock of the variety in New England has been affected until recently, when yellow plants appeared generally in Howard 17 fields throughout New York state. With the Blakemore, yellow plants have appeared in nearly all stocks of the variety from California to Massachusetts, and from British Columbia to Florida. Though it has many characteristics of a virus disease, so far efforts to transmit the trouble artificially have failed, indicating that it may be a sporting or genetic disturbance which is characteristic of these varieties. Many of the seedlings of these varieties show the disease. Runner plants of affected plants are invariably yellow.

"The only known control has been to set disease-free stocks of the Howard 17 and of the Blakemore as free as possible. Plant growers should rogue yellow plants out of their fields, especially in the early part of the season before the runner plants have become so entangled as to make rogueing difficult. It is hoped that consistent rogueing will keep the yellow plants to a minimum which will result in little commercial loss."

Be a member of the A.P.S. Dues are \$1.25 per year. You will get the big Proceedings of the Hartford meeting and a year's subscription to AMERICAN FRUIT GROWER. Send your remittance to H. L. Lantz, Secretary, Ames, Iowa.

MAY, 1936



Early April found J. E. Markham, prominent grower of Xenia, Ill., busy with his fruit breeding work. He is shown in the photograph crossing apple varieties in his orchard. Mr. Markham is a veteran fruit breeder, having engaged in this activity for many years.

STATE NEWS

(Continued from page 15)

week of April 6 for most counties south of Indianapolis. This service, made available through the co-operation of the botany and horticultural departments of Purdue University, has been much appreciated by fruit growers during the past few years. Approximately 1,500 names, including county agents, are now on the free mailing list.

Apple crop prospects during early April appeared to be about normal.

Peach growers have been advised by news articles, mail and through extension meetings to hold up spring pruning until they could determine the extent of the cold weather damage. Judging from observations in orchards in several central and southern Indiana counties, the mortality of leaf buds was very serious in some orchards. Previous experiences in Indiana have shown that delayed pruning, in instances where varying wood portions have been killed, has helped to bring a higher percentage of the trees through the severe injury. The extreme northern tier of counties, experiencing less severe temperatures, and with buds probably in a better dormant condition, have come through with a fair per cent of living fruit buds in several orchards and with much less leaf bud and wood damage.—EVERETT WRIGHT, Sec'y-Treas., Lafayette.

NEBRASKA—Cold weather in January and February, consisting of 28 consecutive days below zero, has resulted in a total loss of peach buds and in many cases the entire tree planting. Recent years have seen the planting of 200 to 300 acres because the mild winters of the past four or five years had shown profitable results with peaches. There will probably be fewer peach trees planted during the next year or two because of this year's losses.

Apricot buds have all been killed and in some instances the trees as well. Loss of about 25 per cent for cherry buds and about the same for pears is reported. Apple buds have come through the bad weather in good shape and there seems to be little damage to the trees. Grasses were injured only slightly.—E. H. HOPPERT, Sec'y, Lincoln.

MAY, 1936

GEORGIA—Four of the leading peach growers in Newnan have planted large peach orchards this season, using the most modern methods of land terracing, before planting, ever seen in the South. The lands in that part of Georgia have suffered seriously from soil erosion. Large terraces were built on which a row of trees was planted, and the balance of the rows were laid off and planted to conform in contour with the terraces. Several of these growers sub-soiled all peach tree rows between the terraces before planting. The present season has witnessed many of the heaviest rains ever recorded in this territory, but so thoroughly was the terracing done that scarcely a terrace on the 600 acres so planted broke. The growers who adopted this system were the First National Bank, J. H. Powell, president, Mrs. C. B. Glover, A. L. Potts, and Tom Glover.

The present indications are that all commercial peach and apple orchards in good condition in Georgia will average practically a full crop during the present season. Modern methods of cultivation, pruning and fertilization have been more widely used than ever before.

For a number of years a few commercial orchardists in Georgia have practiced the application of a nitrogenous fertilizer in late fall and early winter. The season of 1934-1935 saw the use of perhaps 1000 tons of nitrates for this purpose. This proved so successful that the practice has now become almost universal.

Thinning of peaches is rapidly becoming a common practice in Georgia. During the 1935 season several growers started the practice of thinning the blossoms and the method gave practically universal satisfaction. Growers have learned that thinning does not decrease the yield. It does greatly increase the size and quality of the fruit, and reduces greatly harvesting and packing costs. Trees properly thinned make the most satisfactory growth and fruit bud formation for the following season.

(Continued on page 27.)
AMERICAN FRUIT GROWER

Nationwide News

Southern Oregon fruit growers found that they were forced to resort to heavy smudging this year to prevent frost damage. This is an annual battle for the growers and this year they were compelled to use their special knowledge and equipment to a greater degree than in previous years.

▲ ▲ ▲

The extreme temperatures during the winter months had a harmful effect on the movement of all fruits. This was especially true in the northern parts of the country.

▲ ▲ ▲

Fruit packers of Michigan have signified their plans to back a nationwide campaign of cherry advertising.

▲ ▲ ▲

Something similar to a new high in strawberry movements was made recently at Plant City, Fla., when more than 750,000 pints were shipped from that point in one day.

▲ ▲ ▲

A new ground-cherry spread being introduced on the market is meeting with much consumer interest. It is expected that this new product will increase cherry consumption and thus aid the market for this fruit.

▲ ▲ ▲

Commercial orchards of the Southeast have been made safer against the ravages of phony peach disease, peach mosaic and citrus canker by the removal of thousands of infected trees the past few months in that section.

▲ ▲ ▲

Lyle Harper of Watervliet, Mich., was able to demonstrate a phenomena in his strawberry patch when the plants blossomed early in March. Mr. Harper says that this was probably due to his covering the everbearing plants with leaves last fall and that these were then covered with snow, giving protection to the plants which blossomed during the first few warm days in March.

▲ ▲ ▲

A 10-acre grove of citron trees, the only commercial planting of this type of fruit in the United States, is owned by Edwin G. Hart of La Habra Heights, Calif.

▲ ▲ ▲

Damage caused by the oriental peach moth during 1935 at New Brunswick, N. J., was the lightest than in any year since the introduction of this pest.

▲ ▲ ▲

Bridge grafting is probably receiving more attention this year than in many previous seasons due to the rabbit and mice injury which has occurred in northern fruit sections.

PAGE 17

Water aplenty

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THRILLS, and SPILLS, IN ILLINOIS 95% CLEAN APPLE CONTEST

THE winner—and champion of the state of Illinois—is O. G. Jones of Mount Sterling!

As a burst of handclapping broke loose, tense bodies bent forward, the better to see the champion presented with the silver trophy of his victory. Although the scene contained all the elements of the climax of an athletic contest, modestly jubilant champion, disappointed or envious contestants, and comment-chattering onlookers, the setting was, in fact, merely the recent annual banquet of the Illinois State Horticultural Society.

The contest was for membership in "The Illinois 95% Clean Apple Club," with growers from every district in the state endeavoring to win recognition and membership in the club by scoring 95 or more points out of a possible 100.

That Champion Jones did not win the coveted Master Award to which his score of 99.1 per cent entitled him without almost "neck and neck" competition, the following scores of those also awarded certificates of membership in the club show:

Contestant	Society	Variety	Score
O. G. Jones, Mt. Sterling	Central	Winesap	99.1%
M. A. Koeller, Champaign	Central	Red Delicious	98.4%
G. L. Smith, Rock Island	Northern	Golden Delicious	97.5%
Gage & Hawkins, Texico	Southern	Golden Delicious	97.2%
W. T. Anson, Princeton	Northern	Golden Delicious	97.1%
L. T. White, Danvers	Central	Senator	97.0%
Perrine Bros. & Walkington, Tun-nel Hill	Southern	Rome	96.4%
R. H. Hale, Omaha	Southern	Grimes Golden	95.5%

The present statewide organization of the Illinois 95% Clean Apple Club really had its beginning at the 1934 meeting of the Southern Illinois Horticultural Society. At that time four growers were presented with "Certificates of Merit" in recognition of their ability to grow apples 98 per cent free of codling moth injury. At the same meeting there were others who received honorable mention.

Following this meeting, another was held at which the president of the Illinois State Horticultural Society was asked to appoint a committee to outline a "Clean Apple Club" program that would include all of the district societies and thus become a statewide project and contest.

Investigation showed that the methods used by the southern society originated under the direct supervision of Prof. W. P. Flint of the Illinois State Natural History Survey Division and Agricultural Experiment Station. Accordingly, Prof. Flint was named chairman of the committee, which included W. R. Soverhill and G. L. Smith of the northern society, Bert Leeper and Myron B.

Shoff of the central society, and Hugh Hale and W. S. Perrine of the southern society.

Last spring this committee met and selected the name, "The Illinois 95% Clean Apple Club," and the qualifications for membership, which require that the grower score 95 out of 100 points based on the following score card:

35% for codling moth control
25% for scab, blotch and other fungi
10% for curculio and other insects
10% for spray injury
5% for foliage, color, size and tree growth
5% for orchard sanitation
5% for pruning
5% for soil treatment

This system of grading not only cared for codling moth control, but provided a complete outline of the setup necessary to produce and to continue to produce fruit that would meet the grade requirements to entitle the grower to membership in the Illinois 95% Clean Apple Club.

Some of the conditions required to enter competition for membership are:

Fall and winter varieties only are eligible.

That a grower be allowed to enter only one variety.

That this variety be named and application for entry be made on or before July 1 in writing to the secretary of the state society.

That the orchard of each applicant contain not less than 50 trees 10 years old or older of the variety named in the application.

Arrangements were made to have each district society issue a certificate of membership to those entries of their society who have made or exceeded the required grade to entitle them to membership in the Illinois 95% Clean Apple Club.

There were a number of entries, indicating a definite interest in a contest of this kind.

Judges were provided under the direction of Prof. Flint and consisted of one entomologist, one pathologist and one grower, the grower to be selected and in each case function in his own district.

In formulating the rules and regulations of the club it was provided that there be one special award or prize to be known as the "Master Award," to be presented to the grower having the highest ranking score in the state. This year the award was a silver trophy cup garnished with a fitting inscription which, as stated, was awarded to Champion Jones of Mount Sterling, Ill.

Growers Inaugurate Publicity Campaign

REALIZING that the consumer is being weaned away from the use of apples by other fruits, progressive growers of Pennsylvania, Maryland, Virginia and West Virginia have banded together under the banners of their state horticultural societies to unite in an effort to stem this tide of non-usage of the King of Fruits.

These growers and business men met recently at Martinsburg at the call of the West Virginia State Horticultural Society. Those present from Pennsylvania were Dr. H. W. Skinner, R. J. Gillan, E. A. Nicodemus, J. H. Karns and D. M. Wertz; from Virginia, E. D. Nininger, Phil H. Good, C. Purcell McCue, Frank Wisler, and W. S. Campfield; from Maryland, G. S. L. Carpenter, J. Andrew Cohill, Lloyd Balderston and G. W. Gardenhour; and from West Virginia were John R. Lewis, Dr. A. B. Eagle, John Y. MacDonald, M. M. Brown, Lee Goldsborough, George Beall, James E. McDonald, George McKee, C. D. Wysong, C. J. Cavalier, Carroll R. Miller, and J. Q. Rhinehart.

The result of the day of study and discussion was a program for apple publicity under the title of *APPALACHIAN APPLES* with Mr. McCue, president of the Virginia society, as president, Dr. Skinner as vice-president, Mr. Brown as treasurer and Carroll R. Miller as managing secretary.

Plans call for the issuance of publicity material on apples to newspapers and magazines, news pictures, "stunts" about apples for short news stories, health and food information to doctors and housewives and radio broadcasts. Financing of the campaign calls for contributions from growers in the four-state apple belt amounting to one-half cent per bushel on U. S. No. 1 and utility grades *only*. Each state was given the task of canvassing growers for contributions to the financing fund.

Heavy Movement By Citrus Co-operative

THE past marketing season has been the heaviest in the career of the California Fruit Growers Exchange.

This fact is probably due to: 1) Florida supply was reduced by frosts; 2) consumer demand held up good (probably because of the increased advertising campaign and established desire); 3) the unprecedented sale of citrus on the foreign markets.

During the season the exchange shipped 52,616 cars of oranges, 17,075 cars of lemons and 2253 cars of grapefruit. These were shipped as packed fruit, and in addition 8142 cars of loose fruit were moved.

Greatest exports on record occurred during the season just past when 5600 cars were shipped to 70 foreign markets, billed to 380 importers.

MAY, 1936

A RECORD —

Three million

FORD TRUCKS AND COMMERCIAL CARS

In this month of May, 1936, Ford Motor Company completes the building of three million trucks and commercial cars . . . one-third of all that have been built since the beginning of the industry.

There is no substitute for experience. Ford experience has been twofold. In addition to advancements in methods of manufacture, Ford engineers have gained a first-hand knowledge of the needs of owners in every field of hauling and delivery service. They know **WHAT** to build, as well as **HOW** to build it. They are able to design and construct units with exact knowledge of requirements . . . to anticipate changes in operating conditions and even to bring about such changes.

The 8-cylinder V-type engine, introduced by Ford into the commercial field, did just that. Bringing power to haul heavy loads at high speeds . . . and the flexibility to cover delivery routes quickly . . . it cut operating costs in all kinds of service.

Ford V-8 Trucks and Commercial Cars have been proved by the past. Experience has improved them for the future. Find out what Ford experience can contribute to your business. Call a Ford dealer today and set a date for an "on-the-job" test with your own loads, under your own operating conditions.

FEATURES OF THE FORD V-8 TRUCK

80-horsepower V-8 engine with full cylinder-length water-jackets, floating-type connecting-rod bearings, dual down-draft economy carburetor, and duplex intake manifold, exhaust valve-seat inserts, factory-set permanent valve clearances, direct-driven ignition, positive lubrication system, directed-flow crankcase ventilation.	Centri-force clutch
More ideal load distribution	Free-shackled springs
Full-floating rear axle	Durable baked-enamel finish
Straddle-mounted pinion	Quick-action safety brakes
Full torque-tube drive	Heavy-duty transmission

Ask your Ford dealer about the Ford Engine and Parts Exchange Plan

Any new 112-inch wheelbase Ford V-8 Commercial Car can be purchased for \$25 a month, with usual low down-payment. Any new 131½-inch or 157-inch wheelbase Ford V-8 Truck can be purchased with the usual low down-payment on the new UCC ½% per month Finance Plans.

FORD V-8 TRUCKS AND COMMERCIAL CARS

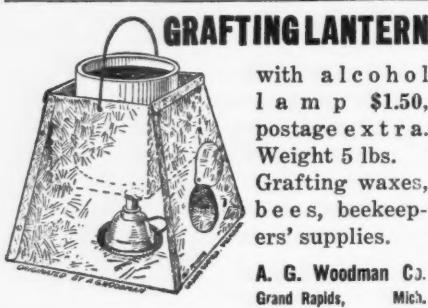
"...with strawberries,

please?"

THAT'S what a great many mothers hear these days. A bowl of Kellogg's with strawberries in milk or cream is one of the greatest treats children know. Thousands of boxes of berries are consumed yearly with this tempting cereal.

The delicious flavor of Kellogg's tastes good at any time of the day. At your grocer's, ask for Kellogg's by name. Guaranteed by Kellogg in Battle Creek.

**Nothing takes the place of
Kellogg's
CORN FLAKES**



HOTEL CHALMETTE

A
*Friendly Place
To Live*

You really enjoy the true spirit of New Orleans when you stop at Hotel Chalmette, just a few blocks from historic Canal Street and within easy reach of all points of interest . . . Large comfortable rooms—low rates.

DAILY \$1.50
WITH BATH . . . Single
DOUBLE WITH BATH \$2.50

NEW ORLEANS

ROADSIDE RETAILING COMES OF AGE

(Continued from page 12)

ing that they were planted only to attract customers and to make his place more profitable. In spite of himself, Gus, the utilitarian, has become an artist. The cold realities of business have achieved an unexpected result. A miracle has taken place.

The same transition is now going on in the roadside produce business. Farmers and others who operate retail stands for the sale of agricultural products are gradually awakening to the necessity for something more than a few bushels of apples and a prayer if they are to get a fair share of the potential business. Here and there we see evidences of vision—intelligent adaptation and reconstruction of natural settings, architecturally designed structures, skillful displays of goods wherein advantage is taken of natural colors of vegetables and fruits. More miracles, just beginning. I am confident another five years will witness greater changes than we have yet seen.

Thus operates the force of competition. Retailers seeking to expand their business have discovered the potency of loveliness. The business man who is intelligent enough and alert enough to appeal to humanity's natural love of beauty converts the traveler into a customer. To his competitor who continues to disregard this impelling force, the potential buyer remains simply another "passer-byer."

Of course, the scramble for profits is not the only impulse back of this beautification of retail establishments along our highways. Many producers and dealers are moved primarily by their inherent desire for neat, clean, attractive surroundings. Educational forces of all kinds, the growing influence of architectural training and of landscape gardening, are all effective. The point I wish to stress is that business competition adds momentum to the movement. Whatever the cause for improvement, the resultant gain in patronage eventually prompts similar changes on the part of observant competitors.

Three years ago I made a study of roadside retailing of farm produce in Ohio, the results of which later appeared as Bulletin 521 of the Ohio Agricultural Experiment Station. In that study, for purposes of comparison, roadside markets were divided arbitrarily into four classifications. In the first group were placed all markets with permanent and more or less substantial buildings. In the second class were grouped those where the building or other shelter was temporary or portable. The third group was composed of markets having no buildings or other shelter but con-

sisting only of more or less elaborate displays of goods visible from the highway. In the fourth group were those having neither separate market buildings nor visible displays, but relying solely upon one or more advertising signs to attract customers. Annual sales were reported by 208 markets, divided fairly equally among the four classes.

It was found that the type of market bore a distinct relationship to the volume of sales. First class markets averaged \$1737, while fourth class markets averaged only \$157. These annual sales seem very low, of course, but it must be kept in mind that the business of these retail markets is confined to a short season and many of them are only secondary sales outlets for their proprietors, who sell at wholesale most of the products grown on their farms. The figures serve acceptably, nevertheless, as a basis of comparison. Note that the average sales of the first class markets were more than 10 times as great as those where little effort was made to exploit the natural attractiveness of rustic locations. The lesson is obvious.

Abundant parking space with easy access for customers' vehicles is an important factor in roadside retailing, yet many markets are established with little or no provision for the parking of buyers' cars. More than 87 per cent of the markets surveyed in the study referred to had parking areas for not more than five cars; 43 per cent had no parking area whatever. Among the better class markets this deficiency was not so pronounced, yet 29 per cent of those in the first three classes had no parking area. Very few provided sufficient parking space to prevent traffic congestion during peak periods.

The relationship between the volume of business done annually and the amount of space provided for customers' cars is shown strikingly in the records of those markets. The average volume of business increased as the capacity of the parking area increased, and these increases in sales were much more pronounced when the capacity rose to six cars or more. Markets with no provision whereby the customer could safely remove his car from the traffic of the highway averaged only \$350. Those whose parking areas accommodated from one to five cars averaged about \$450. Those with capacities of six to 10 cars averaged slightly more than \$1100, while those with capacities of more than 10 cars averaged almost \$4900.

It is true, abundant parking space
(Continued on page 26)

HAIL PROTECTIONIST



W. H. Matthews, prominent Ohio fruit grower, operates a 40-acre apple orchard at Salem. He has used hail insurance on his fruit farm for several years.

THE ELEMENTS' DANCE OF DESTRUCTION

(Continued from page 9)

quire a wind velocity of 116 miles per hour.

The larger hailstones are formed by successive freezings. That is, the rain drops are borne aloft until they come into a region of freezing temperatures where they are frozen and collect snow or other particles of ice. After a time, they fall back toward the earth, reach the level where rain is forming, and collect a layer of water that freezes with another upward excursion to the higher cold air to which they are again carried by strong ascending winds. In the severer cases they repeat these excursions again and again until they build up into a large enough mass to overcome the violent updrafts of wind.

The severe damage in a heavy hail-storm is of much interest to all, and especially to those who have crops that can be ruined. The material damage to houses, automobiles, etc., can be repaired rather quickly and easily; but when a whole summer's work on a crop is swept away in a few minutes, without redress, the full destructive force of the storm is realized.

Based on an average price per bushel, hail causes an annual loss to apples of around \$2,000,000, on the average. These figures fluctuate from year to year, the annual percentage ranging from 0.6 of one per cent to 1.1 per cent.

Because of its very local character, definite, accurate figures on hail are difficult to obtain. The best approximations that cover the country as a whole indicate that there are some

(Continued on page 22)

MAY, 1936

New!

U.S. FARM TIRE!

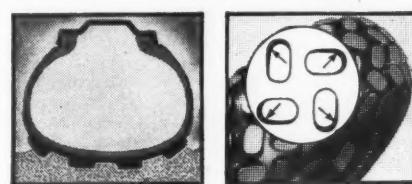
on display at
U.S. TIRE DEALERS



Tests prove the NOBBY type design gives up to 20% MORE TRACTION than any other type of traction tire!

1 DEEP RUGGED NOBS...GRIP!
Only nobs...great rugged nobs...can so grip the ground...dig down...pull your biggest plow through the heaviest going.

2 HEAVY SHOULDER BUTTRESSES
Give Extra Traction—Massive buttresses grip the soil like teeth in a powerful set of gears...taking hold...gripping...hauling forward.



3 HUGE CONTACT AREA *Gives Maximum Grip*—All the broad, flexible tread...both nobs and tread base...spreads out...grips the surface...wraps itself around rough ground.

4 POSITIVE TRACTION ... Every Direction—Gripping edges of husky nobs give equal traction—forward, reverse, sidewise. Tests prove Nobby type design gives up to 20% more traction than any other type of traction tire.

SELF-CLEANING
As the nobs bite in—they grip the soil with a pincer-like action. As pressure is removed dirt between nobs is first loosened...then cleanly ejected by the tire snapping back to normal shape.

FLEXIBILITY
Safety Bonded plies, breaker strips, Tempered Rubber Tread and sidewalls all welded into one unit are more than sufficient to withstand the flex and distortion of low pressure operation.

CUTS COSTS ADDS PROFITS

- ★ SAVES UP TO 25% FUEL
- ★ SAVES 1 OUT OF 4 HOURS
- ★ SAVES UP TO 39% REPAIRS
- ★ INCREASES DRAW BAR PULL
- ★ ADDS RIDING COMFORT
- ★ ADDS YEARS TO LIFE OF EQUIPMENT

MAIL THIS COUPON TODAY!

United States Rubber Products, Inc.
Tire Dept. A, 1790 Broadway, New York, N. Y.

Rush my copy of "Power Farming, Economy and Efficiency."

Name _____

Address _____

State _____



United States Rubber Company

CONTROLLING BUG AND BLIGHT BY TELEPHONE

"WHEN should I spray my orchard?" "How can I control chinch bugs, cutworms, army-worms?" These are questions that come by telephone to entomological departments of the state agricultural colleges. These are typical questions that county agents answer by telephone throughout the country.

In dealing with farm pests, the telephone brings control measures quickly. In keeping you in touch with markets and finding the top price, the telephone helps boost the farm income. In bringing the news of neighborhood doings, the telephone is a friendly aid. In summoning doctor, veterinarian, fire company, peace officer, it is almost invaluable.

Always there, always willing to aid you, always ready to connect you with some one, somewhere, when the need is urgent — the value of the farm telephone can hardly be overestimated.

BELL TELEPHONE SYSTEM



THE ELEMENTS' DANCE OF DESTRUCTION

(Continued from page 21)

limited areas where hail is more prevalent than others. For example, the average number of days with hail are four or somewhat more in a western Great Plains area, extending from western Nebraska southward over western Kansas and the eastern parts of Colorado and including northeastern New Mexico and southeastern Wyoming. In the latter section the annual average is over six days. There is hardly a place in the United States that may not have at least one hail-

storm a year, although some localities average less than one day in a year over a long period of time. Some of these areas are the Southwest, some places along the Gulf of Mexico, most of Florida, and a belt extending from Tennessee southeastward. These figures are not final, of course, and there is no guarantee that the areas mentioned above will not have a hail-storm this year, or even several of them. Averages are at best just an approximation, for it rarely happens in meteorological data that a single year, or month, or even day has exactly the actual average for that period.

AMERICAN FRUIT GROWER

Nut Varieties For Middle Northern Zone

AT THE Rockport, Ind., meeting of the Northern Nut Growers' Association, C. A. Reed of the U.S.D.A. discussed the varieties of nuts suitable for the middle northern zone. He pointed out that an almost confusing number of promising varieties of native species of nut trees is now available for experimental use in test plantings. Mr. Reed undertook to catalog all of the varieties of black walnuts, hickories and hickory hybrids and pecans which have been brought to light within recent years and judged as being highly promising by some recognized authority and not yet discarded.

In keeping with a series of addresses before this body being delivered by Mr. Reed, the discussion was restricted to a particular geographical zone. In this case the zone was that of the middle north, which was outlined as extending from Long Island and Norfolk on the Atlantic Seaboard west to Nebraska and Kansas, and from the lower tips of the Great Lakes south to the southern boundaries of Kentucky and Missouri. Altogether there were included 87 varieties of black walnut, 53 of hickory and 20 of pecan.

In explaining the importance of the zone system, Mr. Reed pointed out that nut trees of native origin become adjusted to the length of the growing period to which they and their ancestors for countless generations have been accustomed, to such extent that when taken to the north where the growing periods are appreciably shorter, the nuts are practically certain to be reduced in size, the kernels less well developed and the crops more irregular. To some extent varieties may be taken southward with safety, especially if the altitude is greater, but in the main, when first-class nut crops are desired, it is well to stick closely to the latitude of origin.

Planting for purposes of experimentation or for landscape effect are quite different matters. Occasional crops may occur at much greater latitudes than that at which a variety originated, and very often seedling nut trees or even grafted stock will grow into handsome shade trees hundreds of miles north of where crops of salable nuts are grown.

Incidentally, the speaker reminded his hearers that no nut trees of these groups should be planted in poor soils; nor should the trees be set so close together that they will crowd or shade one another after reaching the bearing age. He also stressed the desirability of including from four to six varieties of the same species in any planting, even though there be not more than that number of trees. Three reasons were given: 1) cross-pollination, 2) unestablished merits of even the best-known present varieties, and 3) inability of the average planter to procure grafted stock of more than that number of varieties from nurseriesmen.

For the present, said Mr. Reed, the average planter must of necessity use such more or less standard sorts as may be had of nurseriesmen. Those of black walnut are: Thomas, Ohio, Stabler, Ten Eyck, Stambaugh and Rohwer. Those of pecan are: Greenriver, Posey, Major and Niblack. Very few straight hickories can be had from any source. However, Weiker, Kirtland, Romig and Stratford can be obtained from a few nurseries.—G. L. SLATE, Sec'y, Northern Nut Growers Ass'n, Geneva, N.Y.

Small fruit specialists at the New York Agricultural Experiment Station feel that growers in the East have a good market for raspberries in the larger cities of this section and are recommending that planting of this fruit be expanded to take advantage of the demand.

MAY, 1938

MAKING OF A NEW FRUIT

(Continued from page 10)

purple being a cross between the red and black.

Experience is said to be our best teacher, and without question it does teach us many things. For instance, we find out by trial that certain parents give a much higher percentage of desirable offspring than others. Possibly this is due to the presence of dominant characters or to the fact that certain desirable characters are fixed or homozygous. The Elberta and Crawford peaches, for instance, throw many seedlings that are not unlike their parent. A local peach in central New York is said to breed true to seed, but probably some variation occurs in its seedling. The Agen prune, which was probably derived from plums grown for centuries from seed, is undoubtedly more fixed than most varieties, judging from the performance of its progeny. The European grape is apparently more or less homozygous for high quality, at least it imparts good quality in a much higher degree to its offspring than the American grapes. McIntosh has been prominent in transmitting high quality to its seedlings. The late W. T. Macoun of Canada frequently called our attention to this fact. The Baldwin, Rhode Island Greening, Tompkins King and Gravenstein, on the other hand, have given nothing but weak seedlings. The reasons for these failures are now known to be due to the irregularities in the chromosome numbers. Seckel, exposed to open cross-pollination, gave comparatively few noteworthy seedlings. The Bartlett, on the other hand, has given many seedlings of promise.

Of the many strawberry varieties used in breeding, Howard, also known as Premier, has ranked as one of the best parents. Howard crossed with Marshall gave the promising varieties Clermont, Culver and Catskill, and when crossed with the Royal Sovereign by George M. Darrow of the U. S. D. A., the Dorsett and Fairfax.

A fortunate cross in the red raspberries was a combination of the Newman and Herbert, two Canadian varieties. One of the resulting seedlings, namely Newburgh, produces exceptionally large and firm berries, and has productive and remarkably mosaic-resistant plants. Later, G. L. Slate of the Geneva station crossed the Newman with the Lloyd George, a large soft-fleshed English variety, and obtained several seedlings of outstanding merit.

Many more varieties and crosses that have given favorable results might be mentioned, but space forbids. The few given, I believe, illustrate the necessity of determining the kinds that give good results and then "hitting these hard." The use of the best

HAIL INSURANCE for FRUIT CROPS

You spray, you dust, you fertilize, you prune; yet all this work and expense can be wiped out with one hail storm. *Protect your investment with Hail Insurance in a reliable company. No community is safe against hail. Let one of the Old-Line companies named below—with their risks distributed over the whole country—carry your risk for you.*



Apples ruined by hail in the Byrd orchard—Virginia.



The kind of damage that hail does. These apples a total loss.

Ætna Insurance Company
World Fire & Marine Insurance Company
Piedmont Fire Insurance Company

Insurance Company of North America
Alliance Insurance Company
Philadelphia Fire & Marine Insurance Company
National Security Fire Insurance Company
Central Fire Insurance Company

Springfield Fire and Marine Insurance Company
Sentinel Fire Insurance Company
Michigan Fire & Marine Insurance Company
New England Fire Insurance Company

SEE LOCAL AGENT IN YOUR TOWN
OR ADDRESS THE COMPANY

HAIL DEPARTMENT

209 West Jackson Blvd.

CHICAGO, ILL.

progeny from these superior parents for further breeding cannot be stressed too strongly. I am convinced that the continued use of the superior individuals that appear in each generation will give better results, commercially speaking, than if the same time and expense were devoted to inbreeding for several generations and then crossing these inbred strains. The former method will continually give better fruits, while the latter will give nothing until the crosses are made; because selfing, except in the case of the black raspberry, has given mostly weak and inferior progeny.

The methods used in plant breeding must necessarily vary with the fruit. First of all, the parents must be selected. Next, the flower-buds must be emasculated (stamens, or male flower parts, calyx and corolla cut from flower) shortly before they open, unless the variety is self-unfruitful. In the case of the grape, forceps are used in pulling off the calyx and stamens. A sharp knife or scalpel can be used in emasculating the buds of most of the tree fruits, strawberries and raspberries. A circular cut just below the point where the stamens are attached will remove the calyx, corolla

Save Extra Sprayings

Use "Black Leaf 40" with Other Standard Spray Materials

To Kill Codling Moth, Aphis, Red-Bug, Leaf-Hopper

"Black Leaf 40" added to stomach poison or "summer-oil" sprays assures a better kill of codling moth. Stomach poisons kill worms after they eat. "Summer-oil" kills the eggs. "Black Leaf 40" kills mature eggs and young worms, and when lime is added it kills adult moths. It will pay to include "Black Leaf 40" in your codling moth sprays this year.

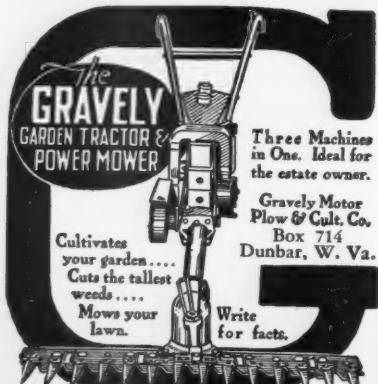
You should also guard against Aphis, Red-Bug, and Leaf-Hopper which may damage foliage and gnarl or dwarf fruit. "Black Leaf 40" used alone or with other sprays, kills these insects—*by contact and by fumes*.

"BLACK LEAF 40" IS SAFE TO USE

"Black Leaf 40" is of vegetable origin—it is not caustic—does not "burn" man, horses, trees or crops. Does not injure foliage. Being volatile, it "fumes off" (evaporates) from fruit and foliage. Concentrated, effective, easy to mix and to apply.

Ask your Spray Material Dealer for "Black Leaf 40" in Original, Factory-Sealed containers to assure full strength.

**TOBACCO BY-PRODUCTS & CHEMICAL CORP.
INCORPORATED · LOUISVILLE, KENTUCKY**



Three Machines
in One. Ideal for
the estate owner.

Gravely Motor
Plow & Cult. Co.
Box 714
Dunbar, W. Va.

Cultivates
your garden....
Cuts the tallest
weeds....
Mows your
lawn.

Write
for facts.

Apple, Peach, Fruit Graders

that are dependable, at low cost.

Priced \$100.00 and up.

For particulars write

**PARMA WATER LIFTER CO.,
Parma, Idaho, U. S. A.**

BAND YOUR APPLE TREES

KILL CODLING MOTH

Our experience has taught us how to chemically treat *TREE BANDS* that are guaranteed to kill the worms.

Write for Circulars and Prices

EDWIN H. HOUSE Saugatuck, Mich.
Remember, we pay the freight.

AMERICAN FRUIT GROWER

and stamens in one operation. Sharp fingernails may also be employed to advantage. Delicious and some of its seedlings do not respond to such a drastic treatment, and in such cases the anthers alone should be removed.

After emasculation, the flower-buds are covered with a white paper sack in order to prevent possible contamination. Pollen may be applied immediately after emasculation or two or three days later when the stigmas are receptive. After pollination the bag must be replaced and left on for a week or two, until the pistils have withered. Later, netting-sacks should be used to protect the fruit. In the case of the grape, the paper bag is left on until harvest. The bags are fastened to the plant by copper-wired tree-labels. On the label is written the date, cross and location.

The pollen may be taken directly from the tree or plant, but the simplest and most efficient method, except in the case of the grape, is to harvest the flower-buds just prior to opening. The anthers are cut off into an open dish. Within a day in a warm room the anthers will have shed their pollen. The pollen is then applied to the stigmas by the tip of the finger or a small brush. Before dipping into another kind of pollen, the finger or brush, as the case may be, is sterilized with alcohol.

The seed, of course, is the only portion of the fruit that the breeder is interested in. As no two seeds, even from the same fruit, will produce identical seedlings, it is essential to save every seed. There are various ways of handling seed but the system tried at Geneva is as follows: After harvest, the seed is removed, encased in a pearl-wire netting and buried in about five inches of well-drained sandy soil. A label bearing the breeding number is placed in each package. When the seed is small, as in the case of the strawberry and raspberry, it is mixed with a little sand, folded into a heavy cloth, and then encased in the netting. After the soil freezes, a light covering of litter is applied. In February, the seed is removed to the greenhouse and planted in flats.

When the first true leaves are formed, the seedlings are planted in paper or clay pots. Care must be exercised in watering and ventilating, for the young plants damp off easily. By the end of May or June the seedlings are ready for transplanting to the field. Strawberry plants are planted directly into the fruiting plantation, raspberries after the end of the first season, grapes after the second season, and the tree fruits after the second or third years. As the seeds of many of the stone fruits, grapes and raspberries do not germinate the first year, the flats may have to be held over a second year.

(Continued on page 27)

MAY, 1936

HAIL INSURANCE

(Continued from page 7)

cent of the amount of insurance, but varies greatly as to the section. The time of writing of the policy has little bearing on the rate in most cases. The rate is usually the same if the policy is taken in June or in September.

Adjustment after loss from a hail-storm is also made on the percentage basis. Although it is impossible to determine the actual loss after a storm, an experienced man is able to establish, with a degree of accuracy, the percentage of the total crop destroyed and an equitable settlement is made on the basis of this determination.

An outstanding obstacle in the path of the development of hail insurance is the existence of hail belts in many fruit sections. These belts are being studied by the insurance companies and rates adjusted.

Another form of hail insurance which caters to the grower wishing greater coverage on severe losses is the percentage deductible policy. If a grower has a 10 per cent deductible and his fruit is ruined, he is paid only for the loss over 10 per cent of the total crop. That is, if he had a 10 per cent deductible policy and 25 per cent of his crop were lost, he would be paid for 15 per cent of the loss. Such policies carry lower rates.

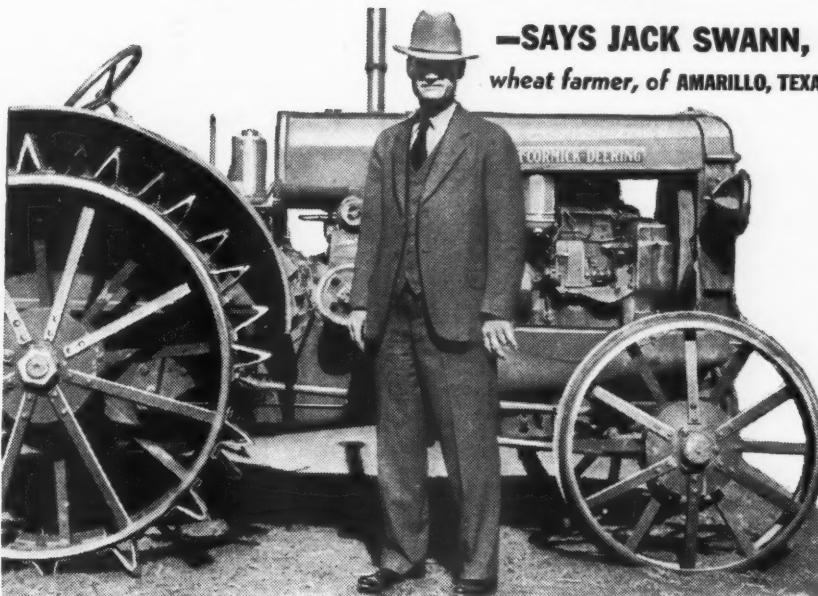
For some years the system of adjustments after losses received criticism from growers. However, there have now been developed, through experience and standardization, definite methods of checking the fruit, which remove the old-time guessing methods from the scene. Under one prominent system the orchard is examined in a general way and then the areas suffering the most and the least damage are selected. Representative trees are chosen in these areas to furnish a judicious picture of the crop, from which samples are taken for careful consideration. In most cases hail damage is more severe on the windward side of the tree and samples are taken from this portion of the tree, also on the leeward side and from points half-way around on the other sides. A strip is selected from the lowest branches to the top of the tree and all of the fruit included in this strip is picked to make up the sample.

The fruit is graded into the following classifications: Commercially sound, slight damage, severe damage, total loss, and culls. The latter classification includes that fruit which was thrown into culls by other causes than hail and there is no allowance made for losses in this classification. After the fruit has been classed and counted, the percentage of loss is computed and the adjustment made on the basis of this figure.

Damage caused by hail varies

"BEST GASOLINE CHEAPEST IN LONG RUN FOR ME"

—SAYS JACK SWANN,
wheat farmer, of AMARILLO, TEXAS



**After trying 1000 gallons of cheap gas, Mr. Swann says,
"Good Gasoline is invaluable in this country."**

THE PANHANDLE is great wheat country, if you work it right—and unforgiving if you don't—or if your machinery fails.

Mr. Swann says, "We run two 22-36 McCormick Deering tractors day and night when plowing and work about 75 acres a day and 75 more at night. Good gasoline and oil keep my machinery in tip-top shape and each tractor does its 37 acres on only about 42 gallons of gasoline, which makes it cheaper for me to use good gasoline.

"I have had considerable experience with different gasolines and have found what is best for me and my machinery. I bought cheap gas and had plenty of trouble. It cost 11c a gallon. The gas I am buying now costs 13c, but it's

good gasoline and in the long run I spend less by using it.

"I use the same gasoline in my two tractors that I use in my car—and I farm 1065 acres and go over the wheat land three times."

Buy good gasoline for your cars, trucks and tractors and get better work—greater convenience—lower oil consumption. Oil companies in every State now sell improved regular gasolines of 70 octane number. Most of these regular gasolines contain lead tetraethyl (anti-knock ingredient) at no extra cost.

Ethyl Gasoline Corporation, Chrysler Building, New York City, manufacturers of anti-knock fluids for premium and regular gasolines.

***It pays to buy GOOD GASOLINE
FOR CARS, TRUCKS AND TRACTORS***

greatly with the time of occurrence and type of fruit. A storm in late July would be more disastrous for the summer varieties of apples than for the winter varieties.

Hail insurance for the fruit grower has provided a definite service in those regions where it has been tried. It

serves to give protection against a risk of the fruit industry that is as ominous as it is unpredictable. The problem of the use of hail insurance to afford this protection is a question that must receive careful thought and consideration by the grower in adapting the insurance to individual needs.

BOLENS TRACTORS

make Gardens and Little Farms Pay



BOLENS models AB and BB are light walking tractors for cultivating, seedling, spraying, digging, garden plowing and many other garden jobs. Famous patented features give accurate control and easy operation.

BOLENS model ZS is a powerful walking tractor, two speeds forward, one reverse, with new easy handling features. Pulls a ten inch plow and other implements of similar draft; excellent for gardening work. Completely motorizes a few-acre farm.

ALL-AMERICAN

LITTLE FARM TRACTOR



is a riding garden tractor, also a general farm tractor on a small scale. Foot lift for plow, hand or foot lift for cultivators. Compact design, delightfully easy to operate, most versatile small tractor that will help make a little farm pay. Write for information.

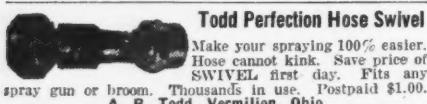
GILSON BOLENS MANUFACTURING CO.
1465 Park St., Port Washington, Wis.

*When your spray gun balks,
don't damn it; rather sand for
a Hamilton Gun, saving
your temper and your fruit.*

Will Hamilton

W. L. HAMILTON & CO.
BANGOR, MICHIGAN

Six Models. Better guns for less money.



Todd Perfection Hose Swivel

Make your spraying 100% easier. Hose cannot kink. Save price of SWIVEL first day. Fits on any spray gun or broom. Thousands in use. Postpaid \$1.00. A. B. Todd, Vermilion, Ohio

SAVE MONEY

Order Now at Low Cost
Your Favorite Magazines

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AMERICAN FRUIT GROWER	1 yr.	ALL 4
Household Magazine	1 yr.	ONLY
National Sportsman	1 yr.	\$1.00
Woman's World	1 yr.	Value \$2.00

Offer No. P-76

AMERICAN FRUIT GROWER	1 yr.	ALL 5
Canner's Farmer	1 yr.	ONLY
Poultry Tribune	1 yr.	
Illustrated Mechanics	1 yr.	\$1.00
Hunting & Fishing	1 yr.	Value \$2.00

Offer No. P-78

AMERICAN FRUIT GROWER	1 yr.	ALL 4
Woman's World	1 yr.	ONLY
Country Home	1 yr.	
McCall's Magazine	1 yr.	\$1.40
		Value \$2.25

Offer No. P-81

AMERICAN FRUIT GROWER	1 yr.	ALL 6
Pictorial Review	1 yr.	ONLY
Household Magazine	1 yr.	
Woman's World	1 yr.	
Hunting & Fishing	1 yr.	\$2.00
McCall's Magazine	1 yr.	Value \$4.00

AMERICAN FRUIT GROWER, 1370 Ontario St., Cleveland, Ohio.

Enclosed find \$..... for which please send me the magazine offer marked with an X.

Name

Postoffice

R.F.D. State.....

ROADSIDE RETAILING COMES OF AGE

(Continued from page 20)

alone cannot assure large receipts. Nevertheless, this factor is influential enough to merit thoughtful planning on the part of retailers everywhere. Customers will stop more readily if provision is made for the safety of vehicles and passengers. Wide, easy approaches are desirable so that cars may leave moving traffic gradually and be brought to a stop slowly.

The development of off-the-highway parking areas to prevent obstructions of traffic at busy points brings two results—more patronage for that particular business establishment and greater safety for all concerned. I have seen this exemplified strikingly on a main thoroughfare near my home in Columbus. There in a congested shopping district lining both sides of that main street for a block or two near the city limits have been for a number of years two popular grocery stores. The only available space for customers' cars was along the curbs of the main thoroughfare and adjacent streets. During busy hours the street before those stores became a bottleneck which slowed down traffic and caused numerous hazards to life and limb.

About two years ago the smaller of these two stores leased an area in the adjoining block with a depth of about 250 feet and frontage of about 200 feet. When this was cleared a modern storeroom was erected on it, not adjacent to the sidewalk, but right in the middle of the area, with the front entrance about 50 feet back from the curb. The storeroom is perhaps 60 feet wide by 150 feet deep, and the remaining space was paved with concrete. The entire curb was leveled to permit access by automobiles right up to the store, and 75 to

100 cars can be accommodated around it at one time. Patronage has grown markedly, while the street traffic moves more steadily with much less danger. The competing store, while larger and under excellent management, has lost ground.

Near the Ohio State University in Columbus is a large community market established two years ago in an extensive building designed originally for a dance hall, and surrounded by an open area capable of accommodating several hundred, perhaps a thousand, automobiles. The venture seems to thrive. Without the parking area it would have no chance for success.

Advertising has its place in roadside merchandising as in any other kind of retailing, and naturally the emphasis is placed on outdoor advertising. Yet nowhere else does there seem to be so little sound advertising practice. Most of it is utterly ineffective in drawing patronage owing to the confusion resulting from the many contradictory appeals of various advertisers. Especially are those signs and billboards ineffective when clustered closely, in large numbers, either at some roadside business place or elsewhere. A few well-chosen and well-located signs are far more influential in bringing in the customers, particularly when the removal of the surplus and unnecessary posters results in making the gasoline station, produce market or inn more inviting.

Not only is much of our roadside advertising ineffective—a great deal of it is downright repellent. I know you must have driven through localities where signs and billboards of all kinds and sizes, shapes and colors are strewn about the landscape, carry-

(Continued on page 28)



This roadside fruit market combines a means of fruit sale, store facilities and living quarters. It is owned by R. L. Wallace and is located near Knoxville, Tenn.

AMERICAN FRUIT GROWER

MAY, 1930

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STATE NEWS

(Continued from page 17)

Enough cold weather occurred during the 1935-1936 winter season in the peach belt to bring about the normal blooming season. The present indications are, as shown by the blooms, that the orchards are in better condition for a normal ripening season than they have been in many years.—G. C. STARCHER, Horticulturist, Prattville, Ala.

WISCONSIN—Reports from growers in various sections of the state indicate serious injury to cherry fruit buds due to the severe weather during February. It looks very much as if Wisconsin will have a short cherry crop this year.

There has been injury in some sections of the state to certain apple varieties, as Snow, McIntosh, Delicious and Wagener. However, Wealthy, Duchess, Dudley and Northwestern Greening are probably not affected.

Interest in hardy English walnuts is surprising even the most optimistic nut enthusiasts. As a result of articles about the new Crath Carpathian English walnuts in several of the leading magazines, including AMERICAN FRUIT GROWER, the Wisconsin Horticultural Society had answered by April 1, 1600 letters of inquiry and had received orders for 150 pounds of the walnuts.

The five-year-old tree in the yard of the secretary of the society came through the past severe winter without any injury. However, there seems to be some terminal bud injury to one-year seedlings planted at Madison in the spring of 1935. Instructions are that the seedlings be covered up to the terminal bud with soil, and if practical, a light covering of hay or straw be added. The planting at Madison was covered only with soil. Some of this had washed away and it looks as if the exposed buds were winter-killed. However, Rev. P. C. Crath states that this happens only to one or two-year old trees.—H. J. RAHMLOW, Sec'y, Madison.

MAKING OF A NEW FRUIT

(Continued from page 24)

The plant and fruit of each seedling is in due time described and its possibilities rated. If the seedling has outstanding characteristics, it may be propagated for general trial, but if its merit is questionable, it is put through several preliminary tests. At the Geneva station all the seedlings that show good possibilities are named and turned over to the New York State Fruit Testing Association of Geneva for propagation and general trial. This final test is the real test, for the varieties are grown under many varied climatic and soil conditions.

The writer in closing wishes to emphasize the need of far more breeding work. The day of picking up seedlings in the wild is about past. Further, far more rapid progress can be made by using selected parents. Breeding work is necessarily slow and non-spectacular, and yet it offers a sure way of securing plants that are resistant to certain pests and that are suitable to the varied soil, climatic and market requirements. What would be the value of a productive, late-keeping, good-quality apple for the northeastern states?

MAY, 1936

Grow 'em big and healthy! with "MAGNETIC SPRAY" SULPHUR

PREPARE now to harvest a big crop of healthy fruit next fall. By using "Magnetic Spray" Sulphur in your spray tank, you can be sure of more "extra fancy's" and less culls. Pests and fungous diseases attack the tender growth of both foliage and fruit, the resulting scars lowering the grade, and the damage done to young tender foliage prevents the tree from producing normal fruit wood, reduced.

"Magnetic Spray" Sulphur will help you fight these profit-eating pests and return to you in added fruit value, many times the money you spend now for spray protection. "Magnetic Spray" is the finest effective wettable sulphur obtainable; it contains 98.5% pure active sulphur. Experimental Stations and Growers everywhere recommend it. Write for a sample—see how it works.

For growers who require a dusting sulphur, we recommend "Magnetic" Super-Adhesive Dusting Sulphur. It is 99.8% pure and refined by a special process that gives it unusual clinging qualities. "Magnetic" has given many years of satisfactory service and protection to fruit growers and is recognized today as the best dusting sulphur on the market. Try "Magnetic" and you will be convinced.

Write for complete instructive spray chart today

NATIONAL SULPHUR COMPANY
2709 Graybar Bldg. New York City
A Division of Stauffer Chemical Company
Chicago San Francisco Los Angeles Freeport, Texas



National
offers two new
dusting products, each
a powerful combination
insecticide and fungicide.
Write for literature giving
the uses of ROTEN-
ONE-SULPHUR DUST
and PYRETHRUM
SULPHUR
DUST

NICHOLS

COPPER SULPHATE
gives best results in home mixed
BORDEAUX MIXTURE

Always uniform—99% pure!

Write for new booklet, "Bordeaux
Mixture—Its Preparation and Use."

NICHOLS COPPER CO.
A Unit of the Phelps Dodge Corporation
40 WALL ST., N.Y.C. • 230 N. MICH. AVE., CHICAGO



OPPORTUNITY ADS

Only 15c a Word—CASH WITH ORDER
ADDRESS: AMERICAN FRUIT GROWER,
1370 Ontario Street, Cleveland, Ohio

BABY CHICKS

GET YOUR CHICKS FROM WORLD'S LARGEST chick producer and save money. Leading breeds hatching daily. Big catalog free. COLONIAL POULTRY FARMS, Box A, Pleasant Hill, Missouri.

BASKET TURNERS

COWL BASKET TURNER, BENCH STYLE, TURNS over 2,000 baskets per day and gives an even face. Price \$15.00 plus parcel post. Dealer proposition. FRUIT PACKING EQUIPMENT COMPANY, Swoope, Virginia.

BEES

PACKAGE BEES FOR POLLINATION. TWO-POUND package with queen, \$2.45. Three-pound package \$3.15. Four-pound package \$3.85. Also cypress hives. Write for catalog. STOVER APPIARIES, Mayhew, Mississippi. INTEREST ON YOUR MONEY—WRITE AT ONCE. Bees—Orchard Packages—for Pollination. ELLIS HONEY & BEE COMPANY, Houma, Louisiana.

PACKAGE BEES, 2 LBS. \$2.45; 3 LBS. \$3.15; 4 LBS. \$3.85; 5 LBS. \$4.55. W. O. GIBBS, Brookfield, Georgia.

BEES FOR CROSS POLLINIZING FRUIT BLOOM OR raising honey. Write for prices. D. C. JACKSON, Funston, Georgia.

SEVERE COLD KILLING MANY BEES. PLACE orders now and do not be disappointed. RAPIDES APIARIES, Winnfield, Louisiana.

ORCHARD PACKAGES OUR SPECIALTY. WRITE for information and prices. COTTON BELT APIARIES, Route 2, Paris, Texas.

BEES! ORCHARD SWARMS \$2.45; LARGE COMMERCIAL \$3.15. Expressed. Guaranteed. Instructions furnished. MILLER BROTHERS, Whitsett, Texas.

PROMPT, DEPENDABLE SERVICE ON ORCHARD packages. Five pound package \$4.55. COFFEY APIARIES, Whitsett, Texas.

BERRY BOXES

USE ROLLRIM BERRY BOXES FOR MODERN PACKING of FRUITS AND VEGETABLES. Send for prices. Capacity seventy million annually. ROLLRIM BOX COMPANY, Benton Harbor, Michigan.

CIDER MILLS

ORCHARD PROFITS INCREASED USING CULL APPLES for cider and vinegar. Cider and grape presses and 100 other articles cider mills. How to keep cider sweet and make vinegar quickly. Booklet F free. PALMER BROS., Cos Cob, Connecticut.

DAIRY GOATS

DAIRY GOAT JOURNAL, DEPT. 603, FAIRBURY, Nebr. Monthly Magazine, 25c yearly; 5 months 10c.

FILMS

FILMS—10c PER ROLL, 120 OR 116. REFLEX, Kirksville, Missouri.

FRUIT GRADERS

THE BUTLER SIMPLEX DIVIDES FRUIT INTO ANY four of eight different sizes. "Handles the fruit with rubber gloves." Freight paid east of Mississippi. Hand, \$90.00; with electric motor, \$115.00; with gasoline engine, \$140.00. BUTLER MFG. CO., Conneaut, Ohio.

THE HEACOCK GRADER, BUILT TO MEET EVERY Packing Requirement. Large Capacity, Careful Handling, Durable Construction, Efficient Operation, Reasonable Cost. Write for Folder and Prices. F. J. HEACOCK, Clearville, Pennsylvania.

HOSIERY

BEAUTIFUL SILK HOSIERY, 5 PAIRS, \$1; SAMPLE 2c. DIRECTCO, AF-221 W. Broad, Savannah, Georgia.

NURSERY STOCK

GRAPE VINES: SPRING CLEANUP. PRICES FROM 1c up. Postcard brings list. CARLTON WHEELER, Penn Yan, New York.

APPLE, PEAR, PLUM AND CHERRY SEEDLINGS. Root grafts. Grafting supplies. WHITFORD NURSERY, Farina, Illinois.

PEACH TREES, FRUIT TREE SEEDLINGS, ROOT GRAFTS. JONES NURSERY, Woodlawn, Virginia.

PATENTS

National Trade Mark Company
Munsey Building
Washington, D. C.
Trade Mark Specialists

PATENTS, LOW COST. BOOK AND ADVICE FREE. L. F. RANDOLPH, Dept. 568-A, Washington, D. C.

Readers' Order Blank for Classified Advertising

In the 1936 June Directory Edition

Write Your Ad Here:

AMERICAN FRUIT GROWER, Date..... 1936

1370 Ontario St., Cleveland, Ohio.

Please publish my ad as given above in the Directory Number of AMERICAN FRUIT GROWER. I enclose remittance of \$..... at your rate of 15 cents a word per insertion. I have counted each whole number as a word and also my name and address which is customary. Please classify properly and acknowledge promptly.

Name

Address

ROADSIDE RETAILING

(Continued from page 26)

ing a multiplicity of conflicting sales appeals, suggestions to buy "Cold Rolled" cigarettes, rhymes extolling the virtues of "Germproof" shaving cream, warnings to avoid running out of "Vesuvius" gasoline, commands to "STOP" at "Joe's Hot Puppy Palace." Often these commercial messages are so located as to obscure a lovely view, or to increase traffic hazards, or both. They strike us in the eye so frequently and with such contradictory claims as to be worse than meaningless. The traveler is first bewildered, then antagonized. He resents the impudence of those advertisers who intrude their unwelcome solicitations of patronage in dangerous or in scenic spots, and convert lovely countrysides into rural slums. The motorist in that frame of mind is not likely to become a customer. The policy of wisdom is to rely less upon signs and posters and billboards, and more upon inviting and attractive surroundings.

The point I want to make is that signs and billboards aren't worth what they cost if they fail in their mission. That many of them do fail to bring in the patronage is certain. Any gain in business that might result from well-designed advertising is more than offset by the lost patronage of motorists who are unfavorably impressed by a too profuse display of signs or who are irritated or offended by ill-placed billboards.

The orchardist who seeks increased patronage at his roadside market can make long strides in that direction by developing an attractive market place and surroundings, by providing adequate parking space for customers' vehicles and by advertising judiciously.

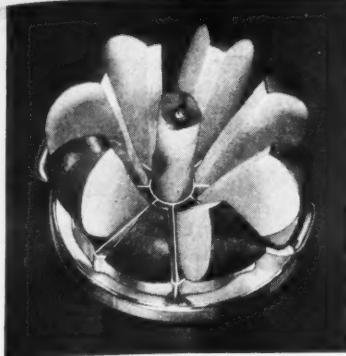
Editor's Note—Other factors in successful roadside retailing will be discussed by Mr. Hauck in the next issue.

Protect Newly Top-Worked Trees

IT IS possible that the severe winter has greatly reduced the number of overwintering climbing cutworms, but the orchardist who has spent time and effort in top-working trees, should take no chances.

It is the experience of C. R. Cutright, associate entomologist of the Ohio Agricultural Experiment Station, that climbing cutworms may be successfully combated by placing a thin band of a sticky material, known as tree Tanglefoot, around the trunk soon after the tree is top-worked. In view of the expense of top-working a tree, it is suggested that the Tanglefoot band be applied before damage is noted rather than after the worms appear. The band is put on in a very thin layer and need be no more than one-half inch or even less in width. Such a band costs little either for material or labor and may save the expense of replacing the scions on the tree.

In some parts of the country the buds of mature apple trees have been seriously harmed by these insects. The treatment suggested for top-worked trees is equally efficient for bearing trees as well.



NEW Apple and Pear Cutter

The perfect fruit sampler for growers. Let your customers and buyers sample your product. The perfect purchase or gift for fruit consumers.

Beautifully and Strongly Made
Quadruple Silver Plated
Will Last a Lifetime

\$2.00 postpaid

AMERICAN FRUIT GROWER
1370 Ontario St., Cleveland, O.

ONE FRENCH WOMAN TELLS ANOTHER

FREE TRIAL at our expense, sent in plain wrapper, also a valuable periodic calendar in celluloid case.

In Europe women are not distressed about normal menstrual periods. They use Dr. Haller's famous Prescriptions, aimed to end most discouraging, over-due, delayed cases in three days. No longer need modern women be satisfied with old-fashioned remedies. Our prescriptions that act like a laxative, when what women really want is quick relief from unnatural delay.

WORKS LIKE MAGIC . . . WOMEN SAY
"It sure is wonderful..." A. E. Wis. "I believe it is the only successful treatment I have ever had." P. J. L. "I had a very bad case of Prescription 5000 and it worked like a charm. It didn't work until the ampoules were used. I didn't think they would work because I tried everything else, but Prescription 5000 sure is wonderful. I was delayed 21-2 months." M. C. "Great Physician." Licensed Druggists Recommend Dr. Haller's Prescriptions, because they are the only complete three-day combination treatments on the American market aimed to give immediate-satisfying-eure results. Dr. Haller's Prescriptions are sold in boxes of five ampoules each, combination packets with complete instructions for home use. Quicker acting than pills or capsules alone. We defy anyone to imitate our treatments. If you want dependable action . . . if ordinary remedies cause you distress . . . if you want the finest products that money and science can produce, then demand Dr. Haller's Famous Prescriptions, costing us about five times more to produce as ordinary "compounds", but you pay no more.

Compare Prescription 5000.
with Ordinary Compounds.
The treatment is very simple and easy to take.
T. S. B., Calif.

GOLD CERTIFICATE GUARANTEE
It is understood that, should the first treatment of either Dr. Haller's "Prescription 5000" or "Prescription 2000" fail to bring relief, we will refund your money, or, at our option, supply you with another \$6.00 or \$2.00 treatment free of charge. We have satisfactorily served women for over Fifty Years.

We Take Your Word and Decision. You Can Trust Us
Don't waste valuable time by waiting. Act immediately.
Send order right now to: V. L. Lewin Drug Inc. Address nearest office. Eastern Office: Steubenville, Ohio; Western Office: 1928 Taft Avenue, Hollywood, Calif.

PILES DON'T BE CUT
UNTIL YOU TRY THIS WONDERFUL TREATMENT
for pile suffering. If you have piles in any form write for a FREE sample of Page's Pile Tablets and you will bless the day that you read this. Write today. E. R. Page Co., 482-A7 Page Bldg., Marshall, Mich.

MAY, 1936

Insurance Protects Grower

By Russell Evarts

THE fruit grower usually has most of "his eggs" in one basket and I am not able to see how it is good business not to have some form of insurance that will reimburse him, in part at least, for expenses incurred in growing the crop. This enables him to "keep his head above water" and have enough to start out with the following year in case the crop is destroyed.

I believe that a grower should insure his crop as soon as he is assured of a set of fruit, for damage is apt to occur at any time. Hail damage occurred in my orchard one year late in June, and in 1935 it was the latter part of September when damage took place. So months or seasons do not mean a great deal. I have always carried some form of hail insurance on my fruit crops, and for the past 12 years it has been carried by one of the old line companies.

My valuations have run as high as \$300 per acre, but of late I have carried lower valuations. In other words, I have tried to place a nominal valuation on the blocks to be insured that would give me a fair return for the costs expended in growing the crop should I suffer a heavy loss from hail.

My orchards, located near Metamora, Mich., are diagrammed off into blocks according to the age, variety and productiveness of the trees. These blocks are then insured according to the above factors, and last season the evaluations ran from \$75 to \$150 per acre.

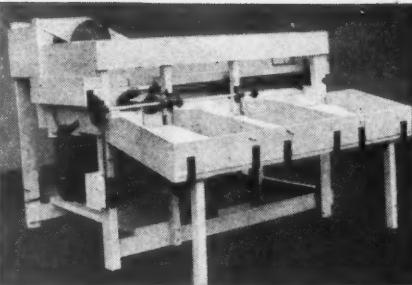
The adjustments are made on the percentage of loss and not on the grower's value of the loss. The company sends out its adjuster and he, with the insured, makes the examination to determine the percentage of damage. With both parties wanting to be fair, there should be no difficulty in arriving at the percentage of loss.

Several trees are selected at random and samples are taken from the side of the trees from which the storm came and on the protected side to make up the composite sample for determination of the loss. There are 50 apples taken from each side of the tree and then the classes in which these apples fall are selected for determining the percentage of loss.

I had 13 different blocks injured in the disastrous hailstorm of September 19, 1935, and adjustments were made in about three hours' time. All of my adjustments have been made in from one to two weeks after the storms. Last season the loss in some blocks ran as high as 76 per cent.

Editor's Note: Mr. Evarts is a prominent Michigan grower who has had much experience with hail insurance, as the above article implies.

AMERICAN FRUIT GROWER



A self-contained grading, brushing and sizing unit complete with gasoline or electric motor and bins. Easily moved. Capacity 600 bushels in 10 hours. Small grower can put up standard pack and compete with large packing houses.

Sells for \$205 to \$350 Write for bulletin
Fred A. Durand **Woodbury, Ga.**

WATER PUMPS WATER

from spring, creek or artesian well having at least 2-ft. fall and flowing 2 gallons per minute or more. A Rife Ram pumps water to house and barn, or for irrigation. Continuous flow. No operating cost. Money's worth or money back. Send for catalog.

RIFE RAM & PUMP WORKS
BOX 17, WAYNESBORO, VA.

FLAME GUN Saves Time—Money! Quickly Destroys Weeds and Brush!

Hauck Kerosene Flame Gun does work of 4 men. 2000°F. controlled heat destroys weeds (seeds and all), brush, reefs, roads, fences, irrigation ditches, orchards, fence posts, objectionable growths—Kills insect pests. Inexpensive—Safe—Easy to operate. 10 day Free Trial Offer. Write today for Free booklet and special introductory price.

Hauck Mfg. Co., 162 Tenth St., Brooklyn, N.Y.

WRITE FOR FREE BOOKLET

STANDARD GARDEN TRACTORS

Powerful Gas Tractors for small farms, gardeners, florists, nurseries, fruit growers & poultrymen.

1 and 2 Cylinders
Walk or ride—Do belt work
High wheels—Free Catalog

STANDARD ENGINE CO.
Minneapolis, Minn. Philadelphia, Pa. New York, N.Y.
3210 Como Ave. 2450 Market St. 206 Cedar St.



Send for FREE CATALOG and SAVE MONEY. Tells you how to BUY DIRECT from the largest Berry Box and Basket Factory at Rock Bottom Prices.

NEW ALBANY BOX & BASKET CO., Box 102, New Albany, Ind.

SUMMER CAMPS FOR CHILDREN

Camp Merry Days for boys and Camp Sandy Neck for girls, Barnstable, Mass. Swimming, rowing, hiking, treasure hunting for real Indian relics for the boys; basketball, tennis, archery, tennis, water sports, arts and crafts for the girls. Character building. Fresh food, expert dietitian, trained nurse. Per month, \$75.00. Mrs. Constance Prowse Lovell, Director.

CAMP ZAKELO HARRISON, MAINE

Founded 1902
Boys 5-19. Four divisions. \$125,000 equipment. Cultivated Teachers, College Athletes, Medical Staff, Tutoring, Elective Cultural and Athletic Activities. Trip Camp, Pre and Post Seasons. Little Theatre, Sailing, Riding. Discriminating Clientele.

Address 15 Parkman Street, Brookline, Massachusetts.

WESTERN MILITARY ACADEMY

Distinguished for High Scholastic Standing. Individual instruction emphasized. Boys taught to do things for themselves. Success based on interest and understanding. Every lesson learned every day. Fully accredited. 58th year. For catalog, address

Major R. K. Latham, Secretary
Western Military Academy
Box 800, Alton, Illinois

PAGE 29

SUCCESSFUL ORCHARDS

● A "ROUND TABLE" PAGE FOR EVERY GROWER ●

LEAF SPOT CONTROL OF RASPBERRIES

MANY growers of small fruits apparently have not been spraying their fruit to control insects and diseases. The recent appearance of various diseases, however, has made this practice necessary for continued production. On this point, A. J. Livesay of Barnesville, Ohio, writes the following:

"For several years I have been letting my raspberries grow without thinking anything about spraying them. When a plant would become diseased or would have insects on or in it, I would pull it out and count it as a loss. We haven't had much trouble except with virus diseases and some of the insects, but for the past few years we have had a good bit of leaf spot. The year before last I sprayed my raspberries right after harvest with Bordeaux mixture. I sprayed them again in three weeks, and then again in another three weeks. Right after the fruit was taken off I took out all of the old canes and burned them. Last year I had little trouble from leaf spot and I am sure that it was because of the spraying. I used a regular commercial Bordeaux mixture to do the job."

WORMS FAIL TO "BEAT THE BAND"

THE practice of banding trees to catch the larvae of the codling moth has another convert in the person of F. R. Dunbar of Gasport, N. Y., whose statement below makes this point clear.

"We found that spraying with the regular materials and schedules was failing to get all of the first brood codling moths in our orchards. Of course, I suppose that it is folly to think that you can get all of the worms, but there were too many of them getting away from us. We decided, therefore, last spring, to try banding the trees. We put the bands on the trees about June 20, and they were of the chemically treated kind. When we took them off it certainly was a surprise to see the number of worms that had spun their cocoons in and under the bands, and all of them had been killed. We used bands on some of the younger trees and slight bark injury occurred. This year we plan to use untreated bands on the young trees, but we are sold on the chemically treated bands for the older trees, as they certainly do the job."

CULTIVATION CONSERVES VALUABLE MOISTURE

SAYS William K. Beattie, general manager of the Stewart Citrus Association of Upland, Calif., regarding the use of cultivation with the furrow type of irrigation: "I cannot see the feasibility of leaving the furrow open between irrigations. On a piece of property belonging to one member of our association where the open furrow plan has been tried, the fruit has not been as good as on the cultivated block adjoining. We do not have as much cultivation as we did in the old days, but we do break up the furrows after every irrigation. We find that we use less water when we cultivate,

This page is a place for growers to get together and exchange experiences and ideas. The beginner, as well as the veteran, will find here many practical suggestions for better and more profitable fruit growing. In return for the helps you receive from this page, be ready to pass on, for the benefit of others, any new idea, method or procedure you have developed or run across. Just jot it down as it occurs to you (a postcard will often do) and mail it to the "ROUND TABLE EDITOR," AMERICAN FRUIT GROWER. Don't worry about fancy writing. What the readers of this page want are practical pointers—that are to the point.

and it is cheaper for us to cultivate than it is to buy more water. It was found that if we missed a spot in the grove when cultivating, it would harden up like a rock and the trees would wilt."

PEACH BLOSSOMS IN WINTER

"SEVERAL of the people around here thought that I didn't know what I was talking about when I told them that the peach buds weren't killed last fall when we had the first cold snap. I then brought some of the branches into the house and put them in water. After a few days they blossomed just as pretty as if they were on the tree. My experience now serves to convince those who don't believe that the peach buds are all right, and I think this is a good way for any fruit grower to tell how his peaches are coming through the winter. Of course, we can always look at the buds for browning and in this manner tell what our crop is likely to be, or not to be, but when you actually see the buds blossom right before your eyes it makes you pretty happy."

The above is from Jack Steenbergen of Wide Hollow, Wash. We sincerely hope the buds of Mr. Steenbergen's peach trees came through the recent cold spell in fine shape.

TREE REMOVAL AIDS AIR DRAINAGE

IN addition to the many factors favoring removal of trees that are of old and worthless varieties, the benefits to be derived from better air drainage may not at once be apparent, but will be

noticed as freezing periods in the spring and fall occur, according to W. W. Ellenwood, prominent fruit grower near Jackson, Ohio, and assistant director of the Ohio Department of Agriculture. Mr. Ellenwood says: "The opening up of spaces in the lower parts of the orchard by the removal of border or marginal trees, which did not pay for the attention given them, gave better air drainage in our orchards and prevented frost injury in the upper, more productive areas."

"SPRAY THE TOPS" MANAGER URGES

"ON the W. D. Johnson Farms, which I manage, we have 107 acres of orchard. Our spraying amounts to considerable each year and for the past few years I have been making some observations which I think are valuable.

"After thorough spraying had been followed during a season I found that a certain percentage of our fruit still had insect stings and some disease blemishes. I watched our men while picking and took note as to where this fruit was coming from and I found that it was mainly being picked from the center and tops of the trees.

"The following season I watched my spraying and took special care to reach the centers and tops of the trees with the spray. We thought that we were careful before this, but during that season we were extra careful. At the end of the season we found that the percentage of blemished fruit was considerably reduced and we attributed it to our care in getting into the tops and centers of the trees with the spray."

GROWER OFFERS PRUNING HINTS

JOHN BUCHANAN of Berwick, Nova Scotia, writes, "Pruning is done by some from custom or for a balance of sunlight to leaves and fruit, and to get a tree whose branches will stand a load of fruit. I think I have a formula for a pruning style which combines these ideals.

"After deciding on the distance apart of the young trees, and supposing an old style 30-foot square orchard is desired, then allow the first branch to come out about 24 to 30 inches from the ground. So far, I can't say that it makes much difference on which side the first branch starts, though I rather favor the south. Take it that the first permanent branch starts on the south, the next permanent branch ought to be up the trunk about 15 inches and start on the north side. This makes the first pair. The third permanent branch can come 15 inches farther up the trunk and on either the east or west. Say the third branch comes on the east of the tree, then the fourth permanent branch will start from the opposite side. You now have the first two pairs. Later, another one or two pairs can be allowed to grow in the 45-degree angle. On large trees I think that one ought to fork the main branches four feet from the trunk."

MAY, 1936

IT'S GOING TO BE
TOUGH TO RAISE THE
SECOND BROOD. EVERY-
ONE'S SWITCHING TO
ASTRINGENT
ARSENATE OF
LEAD

THE fact that you may have started the season without "Astringent" Arsenate of Lead is no reason for running a further risk with your early cover sprays. Infestation is at its height now—and every worm you don't kill is going to plague you a thousand times over when its second brood hatches out.

At horticultural meetings, and wherever growers get together, the word is passed "You'd do well to switch to 'Astringent' Arsenate of Lead. It cleaned up my orchard last year."

We've estimated, from thousands of reports, that 15% to 20% improved control is a conservative average . . . And the "Astringent" product costs no more!



ORCHARD BRAND

REG. U. S. PAT. OFF.
POISON
REG. U. S. PAT. OFF.
PAT. OFF.

SPRAYS AND DUSTS

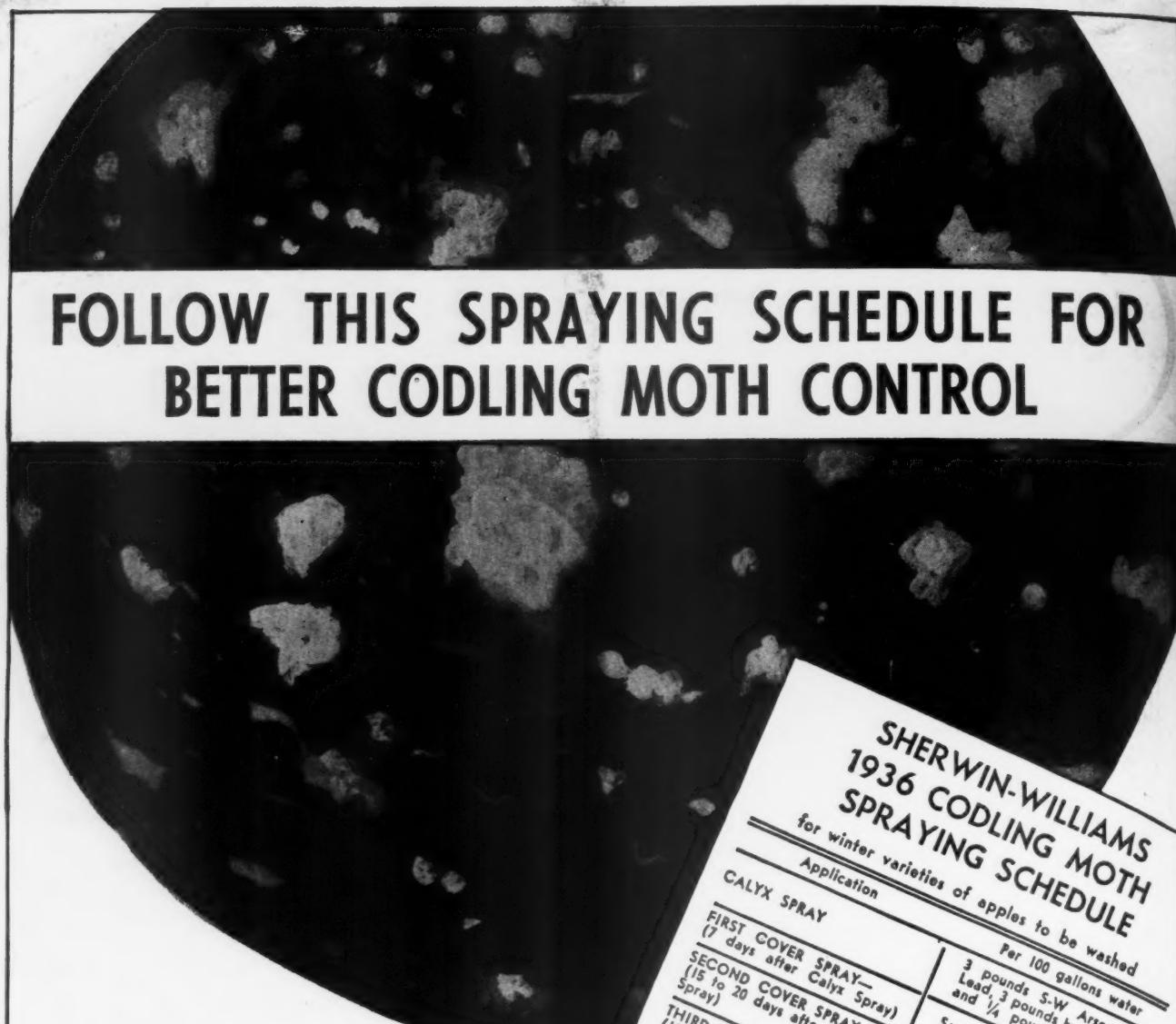
GENERAL CHEMICAL COMPANY

40 Rector St., New York
Offices in Principal Cities

Send me a copy of "Cash Crops." I am especially interested in the product(s) I have underscored below.

Name & Address _____

"ASTRINGENT" ARSENATE OF LEAD — STANDARD ARSENATE OF LEAD — CALCIUM ARSENATE — ARSENITE OF ZINC — BASIC ZINC ARSENATE — PARIS GREEN BORDEAUX MIXTURE — "DRITOMIC" SULPHUR — "APPLE DRITOMIC" SULPHUR — PARADICHLOROBENZENE — NICOTINE SULPHATE (40% NICOTINE) — X-13 (PYRETHRUM EXTRACT) — FUNGI (SULPHUR) DUST — 90/10, 85/15 AND OTHER SULPHUR-ARSENICAL DUSTS — BORDEAUX-ARSENICAL DUST — COPPER LIME DUSTS — ROTENONE DUST



FOLLOW THIS SPRAYING SCHEDULE FOR BETTER CODLING MOTH CONTROL

GREATER DEPOSIT WITH SHERWIN-WILLIAMS ARSENATE OF LEAD

Sherwin-Williams Arsenate of Lead deposits 80 micrograms of arsenic per square inch of apple surface which is necessary to control Codling Moth successfully. Many Arsenates of Lead will not deposit as much as this.

Sherwin-Williams Arsenate of Lead contains not less than 98% of actual Arsenate of Lead.

Use Sherwin-Williams Arsenate of Lead . . . the one that will give you greater deposit and better control of Codling Moth.

THE SHERWIN-WILLIAMS CO.

Insecticide Department
101 Prospect Ave. Cleveland, Ohio

SHERWIN-WILLIAMS 1936 CODLING MOTH SPRAYING SCHEDULE	
Application	for winter varieties of apples to be washed Per 100 gallons water
CALYX SPRAY	3 pounds S-W Arsenate of Lead, 3 pounds hydrated lime and $\frac{1}{4}$ pound Tar-O-Flakes.
FIRST COVER SPRAY— (7 days after Calyx Spray)	Same as for Calyx spray.
SECOND COVER SPRAY— (15 to 20 days after Calyx Spray)	Same as for Calyx spray.
THIRD COVER SPRAY— (10 days after second cover spray)	Same as for Calyx spray.
FOURTH COVER SPRAY— (10 days after third cover spray.)	3 pounds S-W Arsenate of Lead and $\frac{1}{2}$ gallon Summer Mulsion.
SUCCEEDING COVER SPRAYS— (The time to apply additional cover sprays will depend upon the control of first-breed worms by spraying and banding. The time to apply the first spray is approximately 10 weeks after the fall of the bloom.)	3 pounds S-W Arsenate of Lead, 3 pounds hydrated lime and $\frac{1}{4}$ pound Tar-O-Flakes.
Do not use Summer Mulsion or any other oil emulsion after the fourth cover spray because they will interfere with the removal of both lead and arsenic residues.	
For Early Summer Varieties Such As Transparent—Not To Be Washed CALYX SPRAY—2 pounds S-W Arsenate of Lead, 3 pounds hydrated lime and $\frac{1}{4}$ pound Tar-O-Flakes. FIRST, SECOND, THIRD AND FOURTH COVER SPRAYS— $\frac{1}{2}$ Gallon Summer Mulsion and 1 pint Nicotine Sulfate.	



SHERWIN-WILLIAMS SPRAY AND DUST MATERIALS

We need
details of a
building of this
equipment.

Please write
to our office.

Step ladder *Walter J. Gray*
Will you kindly tell me where asphaltic
emulsions for tree wounds can be purchased.
HARVARD FRUIT FARM
shall also thank you for
the address of that firm. *B. B. West*
Dr. W.W. Cox. Gentry, Ark.

Could you tell
where I could
cold storage eqy.
A. Grant

will thank you to put us
in communication with
makers of this equipment.
J. W. Walker
High Rolls.

wire to obtain some
soft rubber rings
for sizing apples.

D. LYLE MILLER & SON
ORCHARDISTS

I am interested in
modern power
spray equipment

Can you tell me who manufactures a
centrifugal or rotary power pressure pump?

Emerson P. Comstock

Tampa, Fla.

give me information regarding
machines or distributors

of paper bags

WOODBURY ORCHARDS

WOODSTOCK, CONNECTICUT

I am desirous of buying some

hand apple pickers.

David H. Stover

Port Huron, Mich.

What is the address of the
manufacturer of the
manufacture filter

refer me to.

any commercial fertilizer companies

also insulating
material manufacturers

Please mail me addresses of
COLD STORAGE machinery firms.

Amos W. Carpenter

We are interested in buying an Apple

am in the market for a peach g

A. Grant

will thank you to put us
in communication with
makers of this equipment.

J. W. Walker
High Rolls.

you tell me the manufacturers of the blow
refrigerating unit to

FOCASTLE FARM

BURNT HILLS, NEW YORK

Please inform us, if possible, where to buy
orange wrappers.

H. A. Basy

pleased to have your suggestions
in touch with the most reliable
such equipment.

Vernon E.

Dearborn, Mich.

Could you furnish me
me with address of
parties who sell the paper
board packages.

Hugo E. Hunsak

Shubrook, N.H.

Can you tell me
for Roaside Market uses.

Also some information where
and a small Apple Grader.

William Colyer Jr.

William Colyer Jr. Please let me know which type
refrigeration you think best

Please get in touch with some dealers.

H. M. Seymour

PATTON, ILLINOIS

E. P. Admire

we would very much appreciate your advising

by one

the names of the manufacturers of the boxes

by one

MANGET BROTHERS CO.

NEWTON, GEORGIA

Would you please i

tell me the name and addre

of the parties that

manufacture these contain

Harold

Wise

Please advise me the name and addre

of the parties that

contain

Susan Schick G.

Albuquerque

Please send

Address of Company who

sells the Medicated

bands

Joe De Brodine

Picking ba

llets

John C. Johnson

Address

of some Company to

Milwaukee

Wisconsin

Would it be possible for you

to give me the name and address of

the makers of packages

Jno. J. Seydel

WINTER HAVEN

FLORIDA

I would like

to know where I can get

cushions and facings as well as lining

F. B. Whitaker

Raleigh, N.C.

The main reason for this letter

is to ask if you will kindly supply me

with the names of manufacturers of One horse

apple picker.

E. M. McNease

Will you please send us the names of au

manufacturers of fruit picking bags,

THE I. W. SCOTT COMPANY

C. H. Beck

SECY

I would like

a reliable

company to obtain some
soft rubber rings
for sizing apples.

D. Lyle Miller & Son

Orchardists

Tampa, Fla.

Will you kindly tell me where asphaltic

emulsions for tree wounds can be purchased.

HARVARD FRUIT FARM

shall also thank you for

the address of that firm. *B. B. West*

Dr. W.W. Cox. Gentry, Ark.

Washing and Cider Making Machines

am in the market for a peach g

A. Grant

will thank you to put us

in communication with

makers of this equipment.

J. W. Walker
High Rolls.

Please write me the name and address of some reliable

firm selling

tools for fruit trees.

John Miller

Madison, Indiana

We need

details of a

building of this type

equipment.

Please send me information regarding

the building of this type

equipment.

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John Miller

Madison, Indiana

We need

details of a

See what happened when
SUPERLA was put to the test!

VARIETY	SPRAY TREATMENT	% CLEAN APPLES	% WORMY	% STUNG
Ben Davis	Superla-Lead-Lime	87.4	0.45	12.3
	Superla-Lead-Lime (1st Brood)	84.05	0.85	15.5
	Superla-Nicotine (2nd Brood)	65.85	0.40	34.0
	Lead-Lime			
Jonathan	Superla-Lead-Lime Paste Oil-Lead-Lime	90.87 72.7	0.8 5.2	8.53 23.8
Grimes	Superla-Lead-Lime Paste Oil-Lead-Spreader	90.0 74.8	0.6 1.4	9.4 23.8
Ben Davis	Superla-Lead-Lime Paste Oil-Lead-Spreader	90.3 65.8	0.6 2.3	9.1 30.9
Ben Davis	Superla-Lead-Bordeaux (1st Brood)	87.31	2.38	10.31
	Superla-Nicotine (2nd Brood)	83.1	2.3	14.6
	Superla-Lead-Bordeaux (1st Brood)	64.68	5.23	30.09
	Verdol-Nicotine (2nd Brood) Superla-Lead-Bordeaux (1st Brood) Lead-Lime (2nd Brood)			
Jonathan	Superla-Lead-Lime Lead-Spreader	94.3 77.4	0.1 1.3	5.6 22.3

**HAVE THIS BETTER PROTECTION
for your HIGH VALUE YIELD
this year!**

In a year which promises to make every apple a "golden apple" for the American fruit grower 87.3% to 94.3% clean fruit is going to mean real money at harvest time.

Superla Summer Spray Oil proved its superiority as a Codling Moth Control conclusively last year—Just in time for you to use it with increased confidence in a year when high per-

centages of grade 1 are going to be profitably important.

This easily removed new spray offers an opportunity to clean up and protect your orchards at minimum cost—just at the time when government regulations on arsenic and lead residues are becoming more strict! Act now, to prevent the losses that always follow when control methods are neglected.

Ask your Standard Oil (Indiana) agent about Superla, or write for complete descriptive, and instructive, literature. Ask also about Den-drol Dormant Spray Oil and Verdol Summer Spray.

SUPERLA **summer spray oil**

Fewer Dollars Do More Work in a John Deere Orchard Tractor



One look at a John Deere Orchard Tractor and you know that here is a tractor specially designed for orchard work . . . built low with a streamlined hood to get under the low-hanging branches.

One trip out in the orchard and you're more convinced. The short turning around trees, the four forward speeds, the built-in power shaft, the easy handling—these are important features.

One day's work and you *know* for sure that John Deere is the tractor you want. John Deere's operating economy wins again.

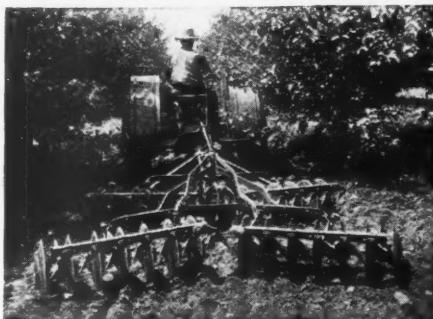
With its exclusive two-cylinder engine design, the John Deere Tractor is specifically designed to burn the low-cost fuels efficiently and successfully. These fuels

usually cost from three to five cents a gallon less than gasoline. They are more powerful. It takes fewer gallons to do a given job.

Much as you like this economy, it is only part of the money you save with a John Deere. John Deere's two-cylinder engine design is simpler. It calls for fewer parts. Parts are more rugged . . . they last longer. Maintenance is easier, there is less of it, and most of it you can handle yourself right on the farm.

John Deere Grove and Orchard Tractors are built in two sizes: the Model AO which handles the load ordinarily pulled by a six-horse team; the Model BO that of a four-horse team. Begin cutting your operating costs now. See your John Deere dealer. Inspect these tractors and the full line of John Deere Orchard equipment: disk harrows, spring-tooth harrows, cultivators, mowers, trailer gears. Use the coupon below for new folder, fully describing John Deere Grove and Orchard Tractors and Equipment.

Built low, this John Deere Model AO Tractor with John Deere Spring-Tooth Harrow easily slips under the low-hanging branches.



It's a fine job that this John Deere Model AO Tractor and John Deere CH Disk Harrow are doing in a New York apple orchard.



Seed-bed maker, weed-destroyer, cultivator—master of many jobs is this John Deere-Van Brunt Model CC Cultivator.

JOHN DEERE

QUALITY FARM EQUIPMENT FOR NEARLY A CENTURY

JOHN DEERE, Moline, Illinois, Dept. BO-42
Please send me, free of cost and without obligation,
a copy of your new booklet on John Deere Grove
and Orchard Tractors and Equipment.

Name _____

Town _____

State _____ R.F.D. _____

**THEY'LL FIND THIS
BASIC ZINC ARSENATE
EASY TO WASH OFF...
BUT IT JUST ABOUT
ruins MY LIFE!**

FOR second brood cover spray protection, and for all the rest of your codling moth spray program, we urge the use of Orchard Brand Basic Zinc Arsenate. It will wash off without harmful residue, in your ordinary acid wash solution.

You can build up and hold an excellent coverage for late applications without worry about a residue problem. The product is adhesive, weathers well and should bring your apple or pear crop to harvest with a minimum of "stung" fruit.

We should like every grower to have a copy of our bulletin on this product. If your dealer hasn't handed you one, please clip the coupon. We'll be glad to send one immediately.



ORCHARD BRAND REG. U.S. PAT.OFF. SPRAYS AND DUSTS

GENERAL CHEMICAL CO., 40 Rector St., New York

Also: ATLANTA, BALTIMORE, BOSTON, BUFFALO, CHARLOTTE, CHICAGO, CLEVELAND, DENVER, KANSAS CITY, LOS ANGELES, MINNEAPOLIS, MONTEZUMA (GA.), PHILADELPHIA, PITTSBURGH, PROVIDENCE, SAN FRANCISCO, SEATTLE, ST. LOUIS.

Send me a copy of your special bulletin on Basic Zinc Arsenate

Name & Address _____

"ASTRINGENT" ARSENATE OF LEAD — STANDARD ARSENATE OF LEAD — CALCIUM ARSENATE — ARSENITE OF ZINC — BASIC ZINC ARSENATE — PARIS GREEN BORDEAUX MIXTURE — "DRITOMIC" SULPHUR — "APPLE DRITOMIC" SULPHUR — PARADICHLOROBENZENE — NICOTINE SULPHATE (40% NICOTINE) — X-13 (PYRETHRUM EXTRACT) — FUNGI (SULPHUR) DUST — 90/10, 85/15 AND OTHER SULPHUR-ARSENICAL DUSTS — BORDEAUX-ARSENICAL DUST — COPPER LIME DUSTS — VEGET-AID DUST

This 4-5 plow "Caterpillar" Diesel RD4 Tractor is operating a 400-gallon power take-off sprayer—on only 1½ gallons of 6-cent fuel an hour.

Note how the smooth, practical streamlining and low overall height of the "Caterpillar" Orchard Model Twenty-Two enable working extra close, under low-hanging branches with heavy tools.



FOR A "STREAM-LINED" BUDGET AND A BONUS ON SKILL! . . .

Ontelaunee Orchards, Inc., Leesport, Pennsylvania, owns 5 "Caterpillar" Diesel Tractors—including this 4-5 plow Diesel RD4. Each of Ontelaunee's 5 "Caterpillar" Diesels operates a 400-gallon power take-off sprayer in hilly orchard on only 1½ gallons of 6-cent fuel per hour!

Thousands of "Caterpillar" Twenty-Two Tractors are pulling such loads as the 6½ or 8 foot cover crop disk, on only 2 gallons of low-cost distillate or gasoline an hour!

Besides the sure-gripping, all-weather traction to work when and where you plan, every "Caterpillar" track-type Tractor

also has a heavy-duty, full-pressure-lubricated engine—with the power and stamina to take full advantage of non-slip traction—to do all work exactly to your standards!

And besides operating at the lowest fuel cost on record, the "Caterpillar" Tractor is built to perform at just as remarkably low an upkeep cost! Ontelaunee's first two "Caterpillar" Diesel Tractors have already operated over 3,000 hours apiece *at no repair cost, whatever!* Every good orchard deserves "Caterpillar" Tractor power.

Caterpillar Tractor Co.,
Peoria, Illinois, U. S. A.

The handy coupon will bring you further provable reasons why fruit-growers buy more "Caterpillar" Tractors than all other makes of track-type tractors put together!

CATERPILLAR TRACTOR CO.
Department AJ
Peoria, Illinois

Gentlemen:

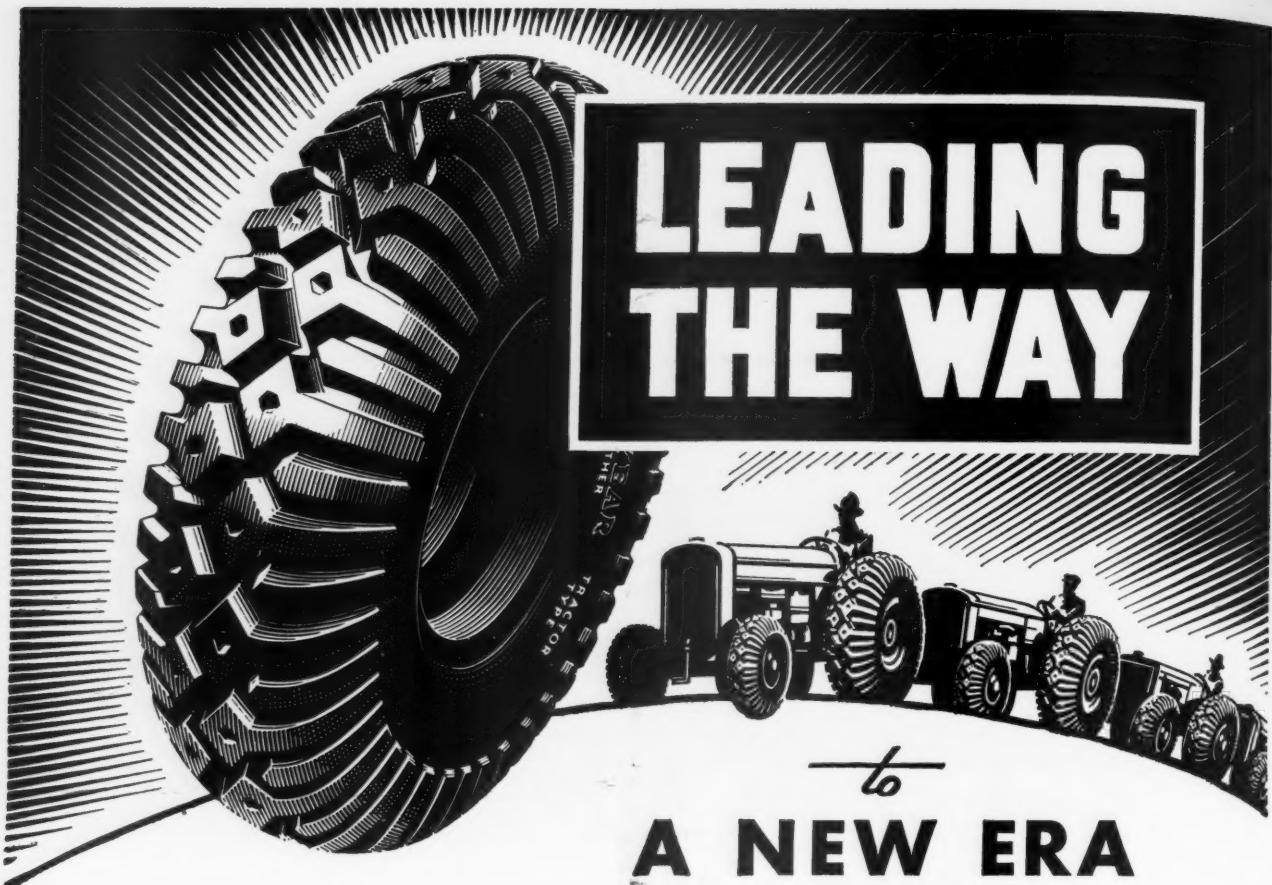
I operate _____ acres of orchard.
Please send me information on items checked:
 "Caterpillar" Orchard Model Twenty-Two Tractor.
 "Caterpillar" Diesel RD4 Tractor.

Name _____

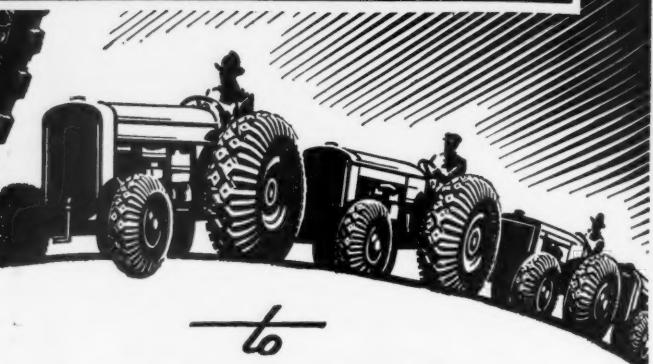
Address _____

CATERPILLAR

REG. U. S. PAT. OFF.



LEADING THE WAY



A NEW ERA IN FARMING

Farmers who have seen this new Goodyear Tractor Type Tire at work agree—it's the greatest farm tire ever built.

They appreciate the fact that it brings to their farms a new conception of modern farming—that it brings them faster work, better work, more economical work than they've ever had before.

If you haven't seen it, you should. We'll be glad to arrange a demonstration. Watch it work. See why this great, new tractor tire has rural America talking. We'll point out how it surpasses even the former Goodyear Farm Tires by giving you

MORE OF EVERYTHING!

50% MORE TRACTION—30% MORE DRAWBAR PULL—100% MORE SHOULDER TREAD—48% MORE RUBBER—30% BETTER CLEANING—and TRACTION ALL WAYS.

You pay no more for this great new tire. You can buy it on the most liberal terms.

THE GOODYEAR
TIRE & RUBBER CO., INC.
Dept. B-5, Akron, Ohio

Arrange a demonstration
of these tires for me.
 Send me the new free 1936
edition of your booklet,
"Farming the 48 States."

NAME _____

ADDRESS _____

CITY and STATE _____

A NEW TIRE FOR OTHER IMPLEMENTS



Here is a new Goodyear Farm Implement Tire built for your other rolling equipment. It is light weight, yet strong. It makes your implements roll easy. It saves time, saves fuel. It's another MONEY SAVER for your farm.



MONEY SAVERS ON YOUR TRUCKS, TOO

Farmers using the improved High Profile Goodyear Truck Tires are reporting amazing savings. This improved truck tire is bigger, sturdier, tougher. It's more tire—more rubber, more cotton . . . more for your money in every way. Yet it costs no more.

Mail
Today

GOOD YEAR

ALL-TRACTION TRACTOR TYPE TIRE